

MSFC-MAN-205  
LINE ITEM NO. 12H  
DRD NO. LS-025A

TECHNICAL MANUAL  
OPERATION AND MAINTENANCE

VOLUME II

SATURN IB & V ELECTRICAL SUPPORT EQUIPMENT  
TYPE 1 COUNT CLOCK

PART NO:

LCC 1371-COUNT RACK-40M08202  
1372-DATA TRANSFER RACK-40M08203  
1253-POWER SUPPLY RACK-40M08204  
1254-REAL TIME RACK-40M08205  
LUT 1255-DATA RECEIVER RACK-40M08206  
1256-POWER SUPPLY RACK-40M08261

**CHANGE**  
NOTICE

LATEST CHANGED

PAGES EFFECTIVE

ON VEHICLE

501 & SUBSEQUENT

RECEIVED  
JAN 03 1967  
J. P. DOLFS

RECEIVED  
JAN 6 1967  
C. E. R 4

PREPARED UNDER AUTHORITY OF CHANGE ORDER 177  
TO CONTRACT NASw-410

BY

GENERAL  ELECTRIC  
APOLLO SUPPORT DEPARTMENT  
HUNTSVILLE, ALABAMA

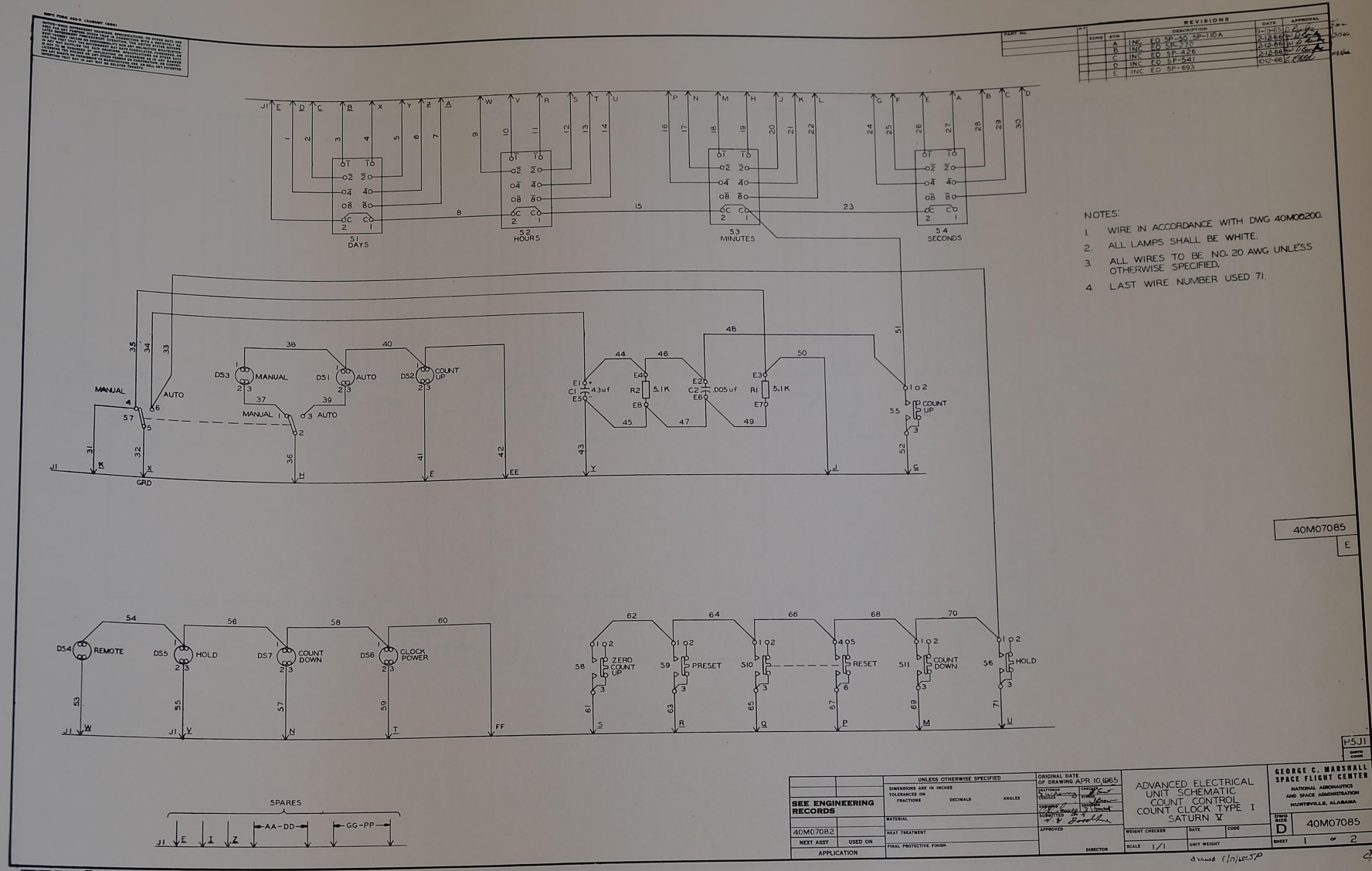
CHANGE DATA  
30 NOVEMBER 1966

# LIST OF EFFECTIVE PAGES

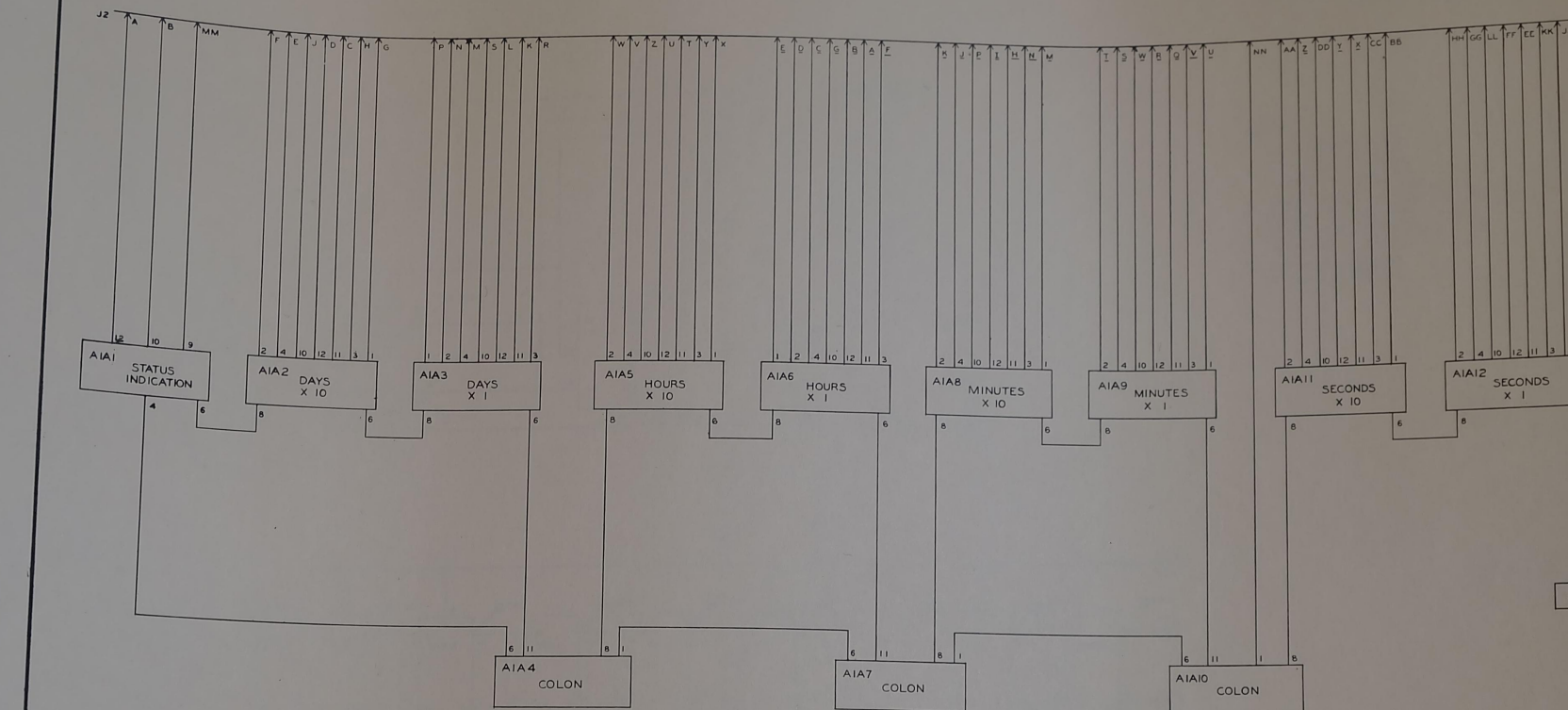
TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 193 CONSISTING  
OF THE FOLLOWING:

<u>Page No.</u>	<u>Issue</u>	<u>Page No.</u>	<u>Issue</u>
*Title	30 Nov. 1966	*6-93 thru 6-99	30 Nov. 1966
*A	30 Nov. 1966	6-100 thru 6-107	Original
i thru ii	Original	*6-108	30 Nov. 1966
6-1 thru 6-21	Original	6-109 thru 6-112	Original
*6-22 thru 6-23	30 Nov. 1966	*6-113	30 Nov. 1966
6-24 thru 6-36	Original	6-114 thru 6-118	Original
*6-37 thru 6-38	30 Nov. 1966	*6-119	30 Nov. 1966
6-39 thru 6-40	Original	6-120 thru 6-121	Original
*6-41 thru 6-57	30 Nov. 1966	*6-122	30 Nov. 1966
6-58 thru 6-70	Original	6-123	Original
*6-71 thru 6-72	30 Nov. 1966	*6-124	30 Nov. 1966
6-73 thru 6-78	Original	6-125 thru 6-144	Original
*6-79	30 Nov. 1966	*6-145 thru 6-148	30 Nov. 1966
6-80 thru 6-83	Original	6-149 thru 6-189	Original
*6-84 thru 6-86	30 Nov. 1966		
6-87	Original		
*6-88 thru 6-89	30 Nov. 1966		
6-90 thru 6-92	Original		

\*The asterisk indicates pages revised, added, or deleted by the current revision.  
Insert latest revised pages. Destroy superseded pages.



				REVISIONS		DATE	APPROVAL
PART NO.	WF	EDITE	BY	DESCRIPTION			
			D	INC EO 5P-541		2-12-66	<i>[Signature]</i>
			E	INC EO 5P-693		10-12-66	<i>[Signature]</i>



E

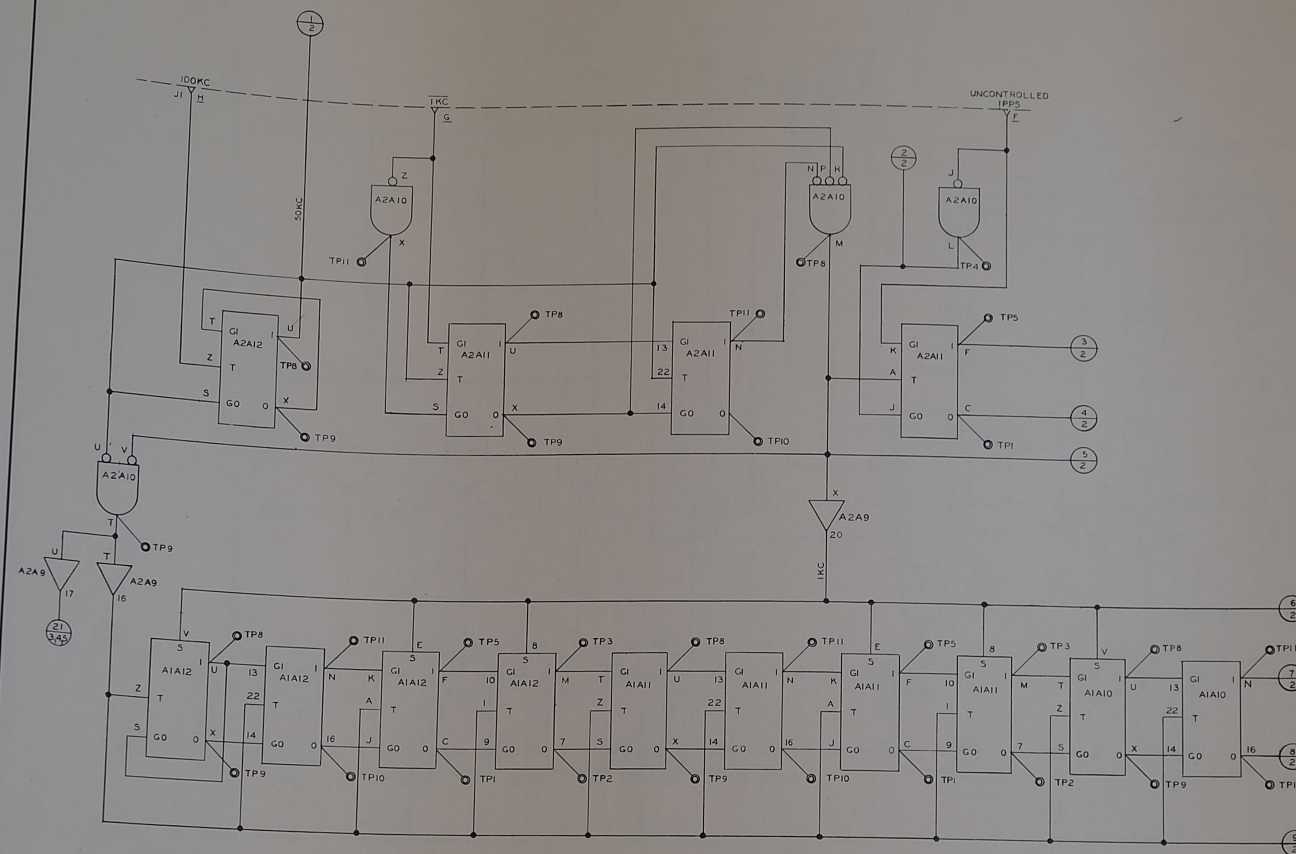
UNLESS OTHERWISE SPECIFIED				ORIGINAL DATE OF DRAWING FEB 12, 1966		ADVANCED ELECTRICAL UNIT SCHEMATIC COUNT CONTROL COUNT CLOCK TYPE I SATURN V		GEORGE C. MARSHALL SPACE FLIGHT CENTER  NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
DIMENSIONS ARE IN INCHES				DESIGNED BY <u>W. H. HARRIS</u> CHECKED BY _____ TOLERANCES ON FRACTIONS DECIMALS ANGLES _____ DRAWN BY _____ CHECKED BY _____ MATERIAL SUBMITTED _____					
SEE ENGINEERING RECORDS				APPROVED _____ WEIGHT CHECKER _____ DATE _____ CODE _____ SCALE <u>1/1</u> UNIT WEIGHT _____					
40M07082 NEXT ASSY _____ USED ON _____ APPLICATION _____				SHEET <u>2</u> OF <u>2</u>					

u: 2-15-66

6-23

NOTE: THIS DRAWING IS THE PROPERTY OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION. IT IS TO BE KEPT IN THE ORIGINAL FILE OF THE PROJECT AND NOT REPRODUCED OR COPIED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION.

REVISIONS			
REV	DATE	DESCRIPTION	APPROVAL
A	2-23-66	INC EO 5P-110	<i>[Signature]</i>
B	2-23-66	INC EO 5P-401	<i>[Signature]</i>
C	2-23-66	INC EO 5P-401	<i>[Signature]</i>
D	2-23-66	INC EO 5P-512	<i>[Signature]</i>
E	2-23-66	INC EO 5P-604	<i>[Signature]</i>



## NOTES:

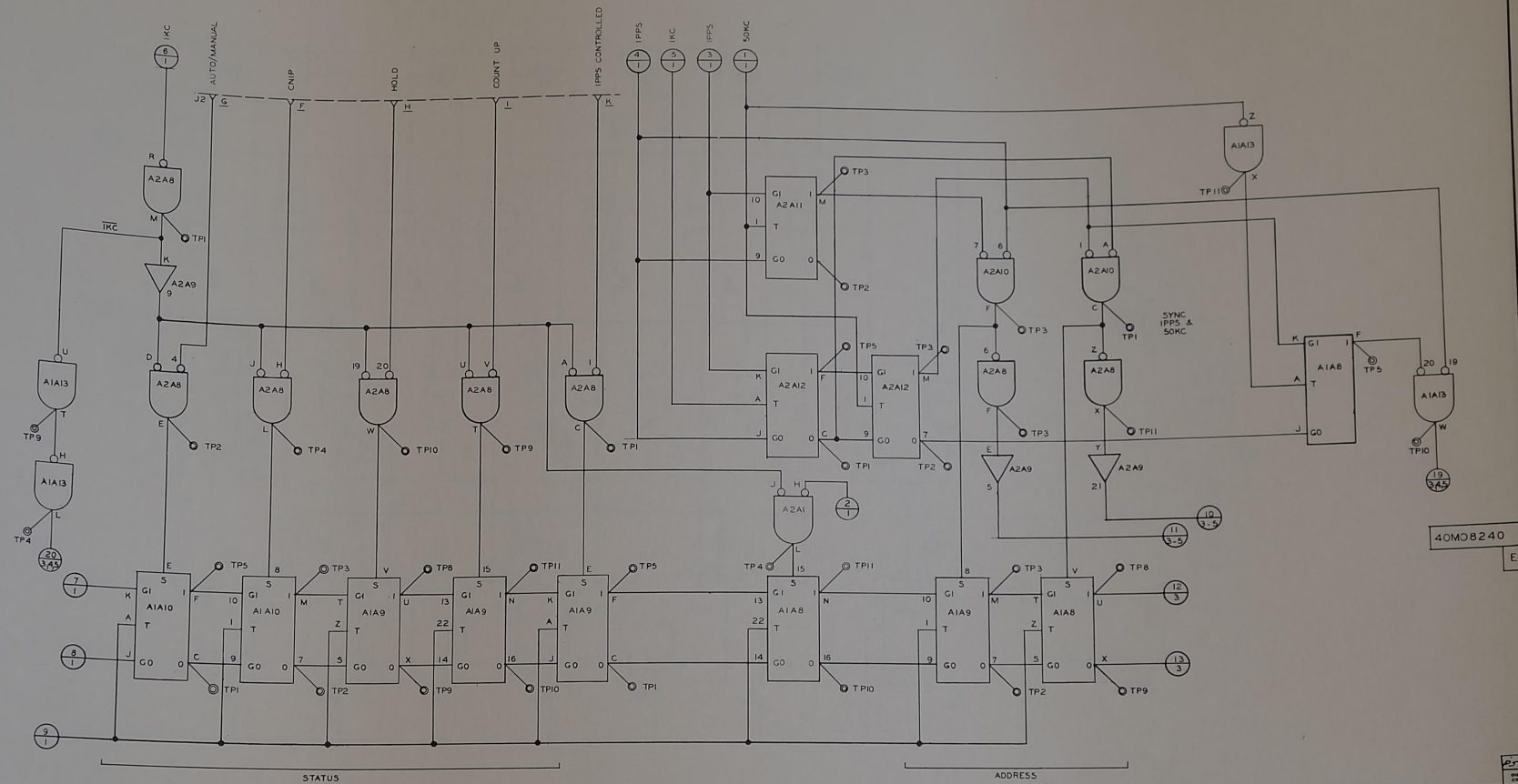
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2. REFERENCE DRAWING: WIRING LIST 40M08238.
3. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN: FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER AND ASSEMBLY DESIGNATION.
4. REFERENCE DRAWING: ASSEMBLY 40M08255.

40M08240

P5R

UNLESS OTHERWISE SPECIFIED			ORIGINAL DATE OF DRAWING: APR 30 65		LOGIC DIAGRAM DATA LINK ENCODER COUNT CLOCK TYPE I SATURN V		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
SEE ENGINEERING RECORDS	DIMENSIONS ARE IN INCHES	TOLERANCES ON FRACTIONS	DECIMALS	ANGLES	WEIGHT CHECKER	DATE	CORE	40M08240
	MATERIAL	HEAT TREATMENT			SCALE	UNIT WEIGHT	SHEET	1 OF 6
NEXT ASSY USED ON APPLICATION	FINAL PROTECTIVE FINISH							

				REVISIONS		DATE	APPROVAL
PART No.	REV	ZONE	SYM	DESCRIPTION			
			A	SEE SHEET ONE		2-23-65	<i>P. Bunde</i>
			B	SEE SHEET ONE		12-9-65	<i>W. H. Hanks</i>
			D	SEE SHEET ONE		27-66	<i>P. Bunde</i>
			E	SEE SHEET ONE		8-1-66	<i>W. Hanks</i>

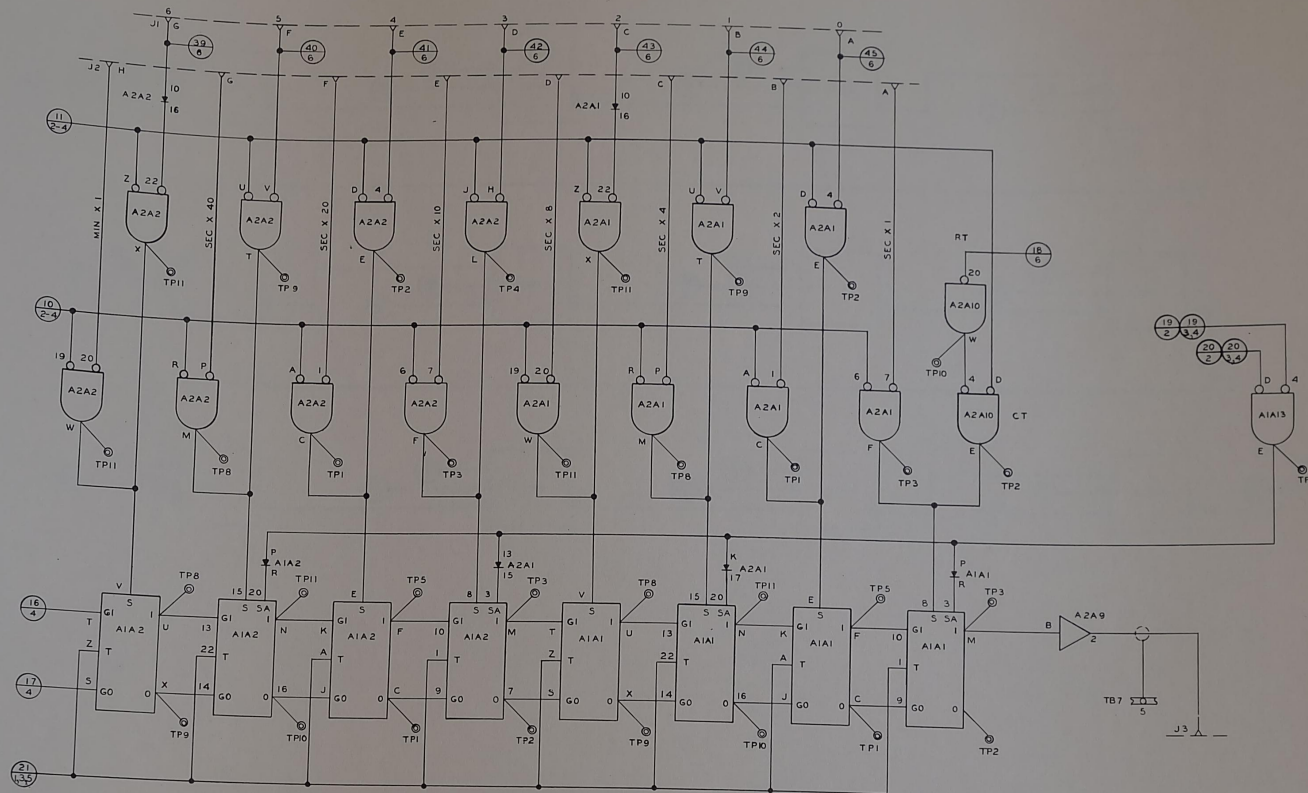


40MO8240

DISR

SEE ENGINEERING RECORDS	UNLESS OTHERWISE SPECIFIED			ORIGINAL DATE OF DRAWING 2 MAY 65	LOGIC DIAGRAM DATA LINK CLOCKER COUNT END CODE TYPE I. SATURN V	GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA
	DIMENSIONS ARE IN INCHES			TOLERANCES ON FRACTIONS DECIMALS ANGLES		
	MATERIAL					
	TREAT TREATMENT					
NEXT ASSY	USED ON	FINAL PROTECTIVE FINISH	DIRECTOR	WEIGHT CHECKER	DATE	CODE
APPLICATION				SCALE	UNIT WEIGHT	
				DRAWN	40M08240	
				BY	2 OF	

6-38



				REVISIONS		DATE	APPROVAL
PART NO.	#	ZONE	SYM	DESCRIPTION			
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		C	SEE SHEET ONE		2-8-66	2-8-66	<i>[Signature]</i>
		D	SEE SHEET ONE		2-8-66	2-8-66	<i>[Signature]</i>
		E	SEE SHEET ONE		B-1-66	2-8-66	<i>[Signature]</i>

40M082 40

8

PS

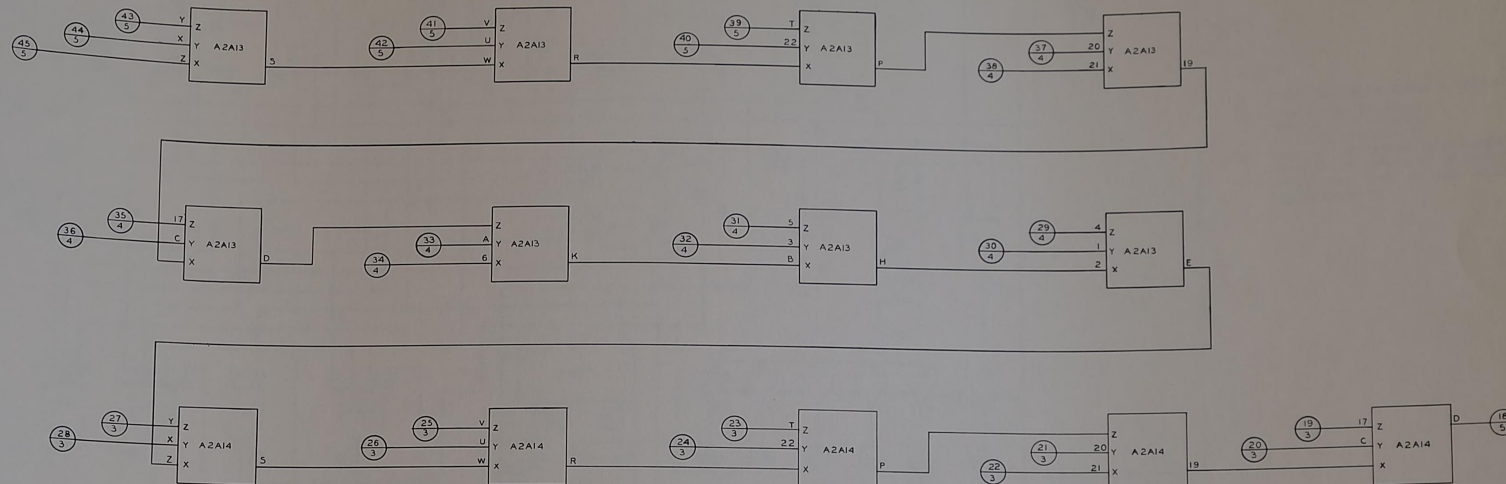
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UNLESS OTHERWISE SPECIFIED			ORIGINAL DATE OF DRAWING APR. 29, 65		LOGIC DIAGRAM DATA LINK ENCODER COUNT CLOCK TYPE I SATURN V		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA		
DIMENSIONS ARE IN INCHES TOLERANCES OR FRACTIONS			CHECKED BY W. J. BROWN SPECIAL IN CHARGE						
SEE ENGINEERING RECORDS	DECIMALS		ANGLES		DRAWN BY W. J. BROWN		DWG NO. D 40M0820		
	MATERIAL		SUBMITTED		CHECKED BY		SHEET 5 OF 40		
NEXT ASSY		PLAT TREATMENT		APPROVED		WEIGHT CHECKER		DATE	CODE
APPLICATION		FINAL PROTECTIVE FINISH		DIRECTOR		SCALE		UNIT WEIGHT	

Change Date  
30 November, 1966

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.  
DIMENSIONS ARE TO BE GIVEN TO THE CENTER OF GRAVITY OF THE PART.  
DIMENSIONS ARE TO BE GIVEN TO THE CENTER OF GRAVITY OF THE PART.  
DIMENSIONS ARE TO BE GIVEN TO THE CENTER OF GRAVITY OF THE PART.  
DIMENSIONS ARE TO BE GIVEN TO THE CENTER OF GRAVITY OF THE PART.  
DIMENSIONS ARE TO BE GIVEN TO THE CENTER OF GRAVITY OF THE PART.

REVISIONS			
DATE	APPROVAL	DESCRIPTION	BY
12-9-65	3	SEE SHEET ONE	C
8-1-66	1	SEE SHEET ONE	E

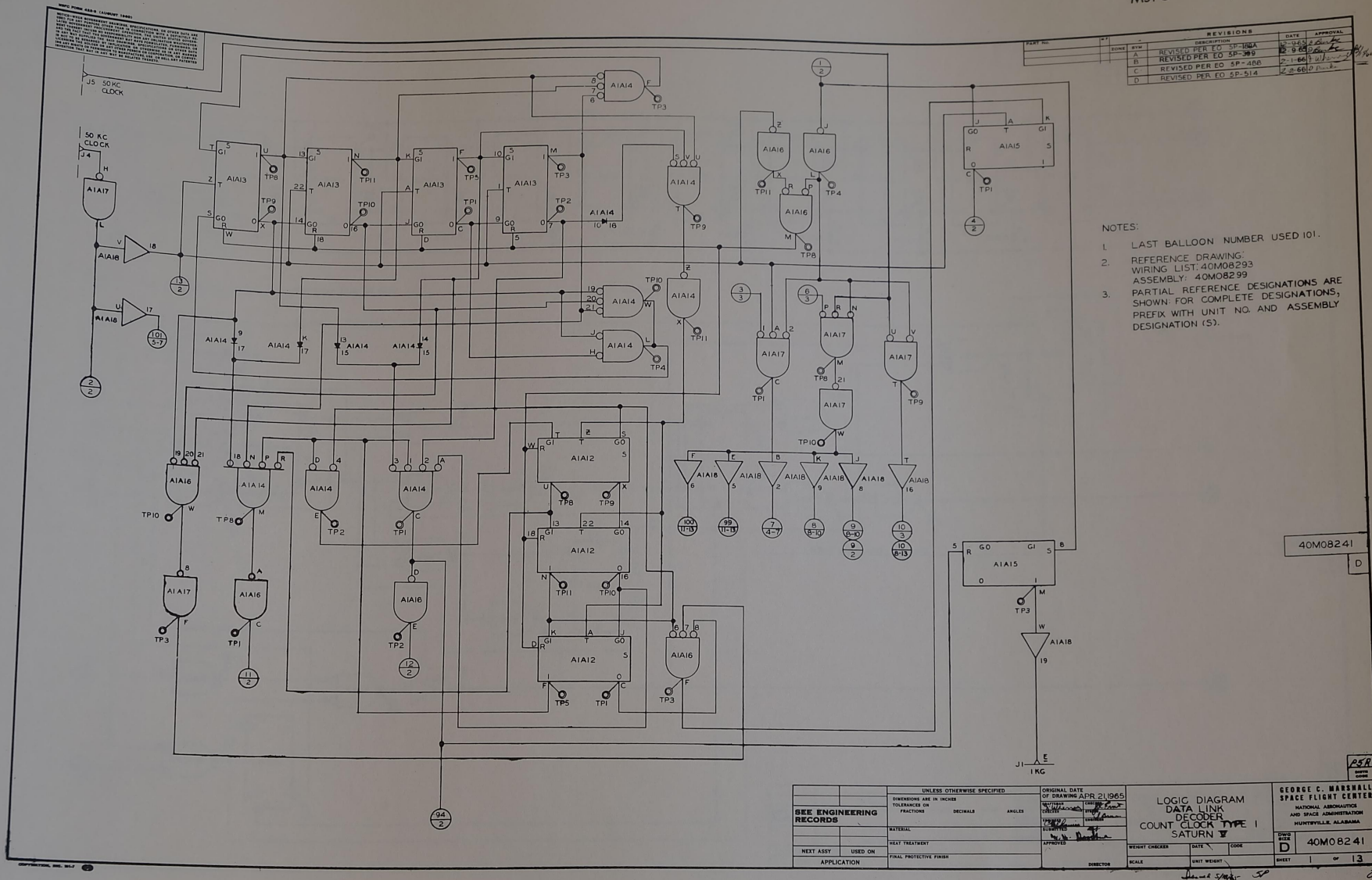


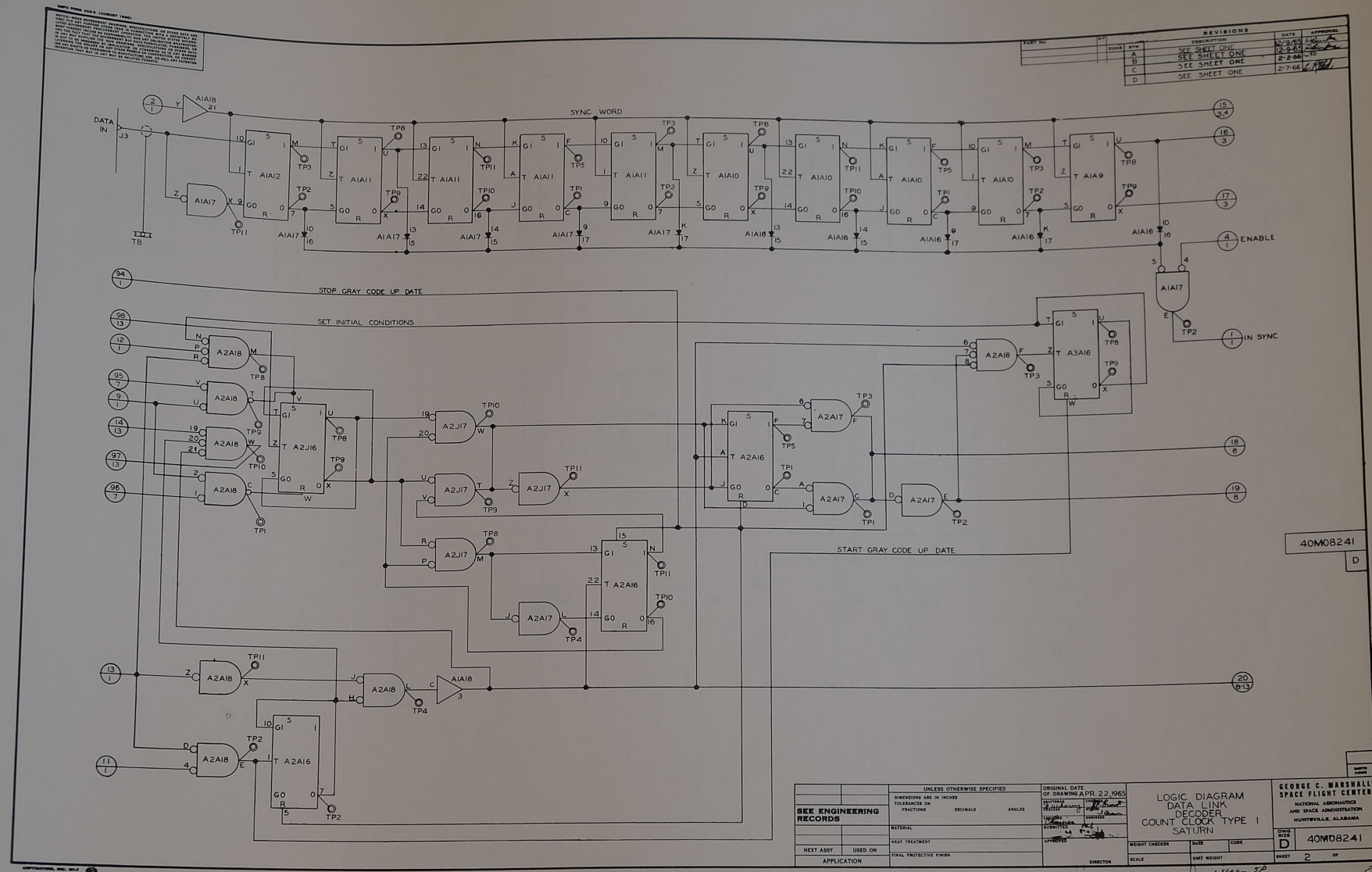
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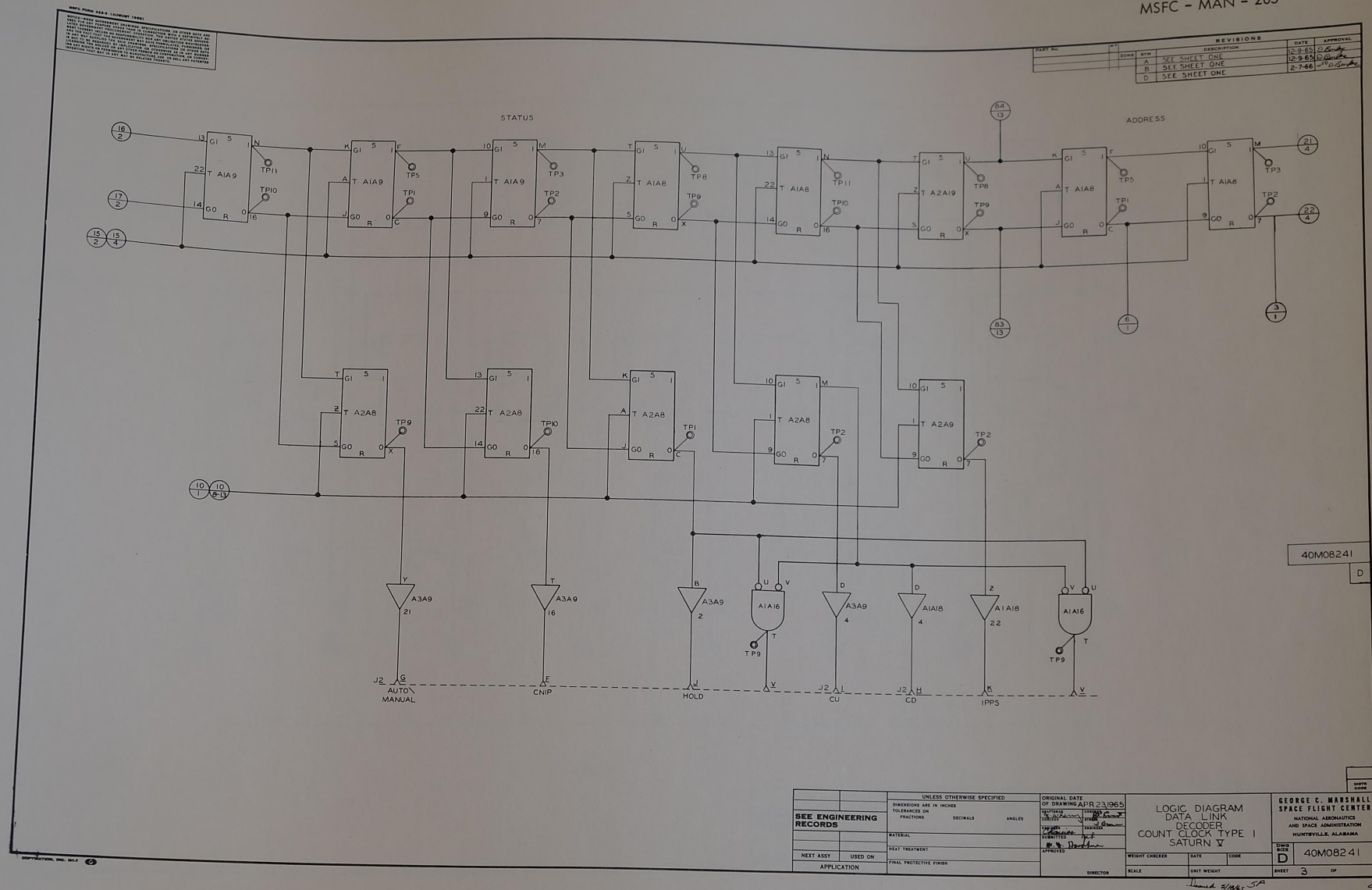
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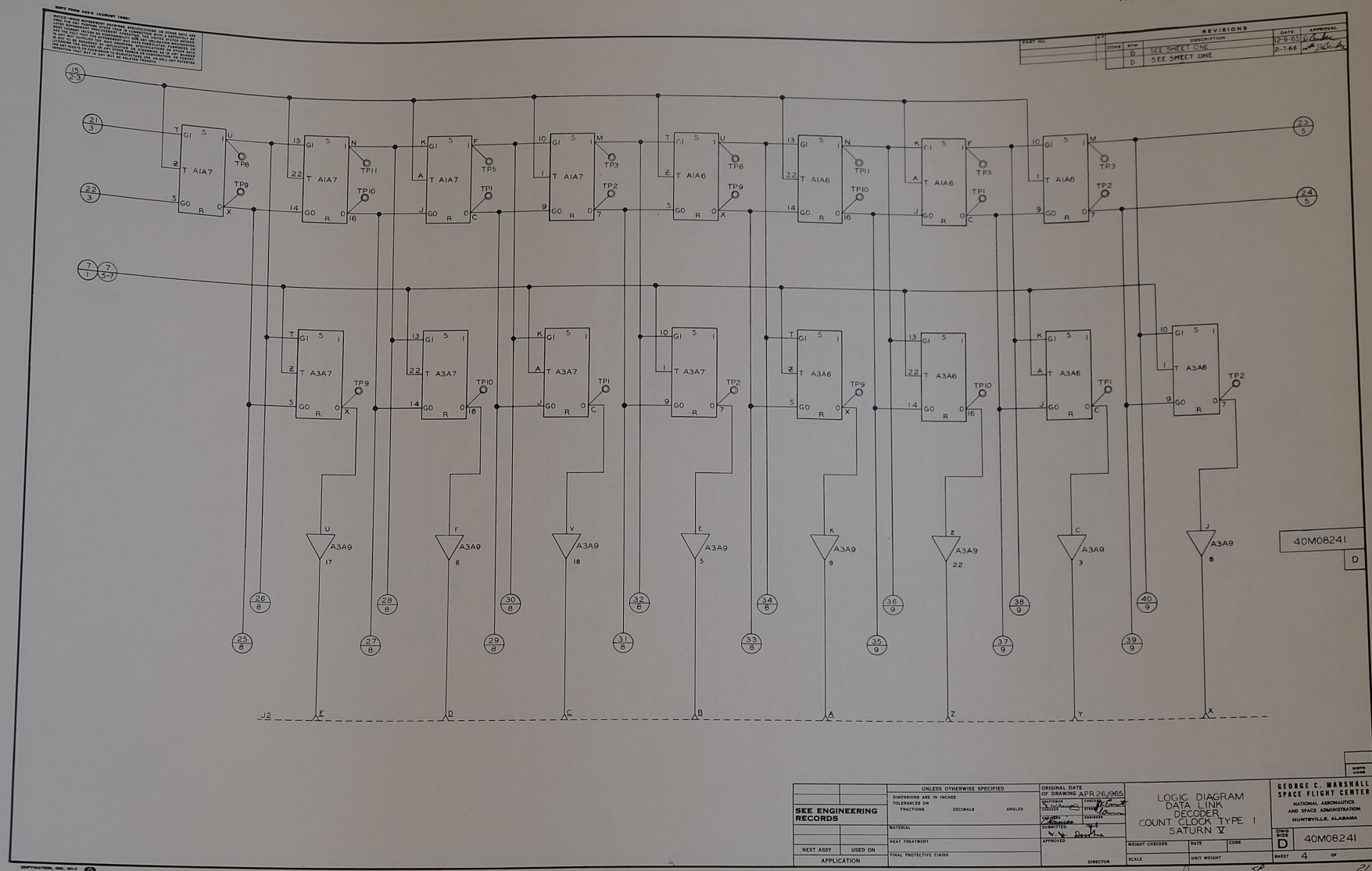
P5R

SEE ENGINEERING RECORDS		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING DEC. 9, 1965		LOGIC DIAGRAM DATA LINK ENCODER COUNT CLOCK TYPE I SATURN V		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
		DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES		DESIGNED BY CHECKED BY ENGINEER BY					
NEXT ASSY		MATERIAL		APPROVED		WEIGHT CHECKER		DATE	
USED ON		NEXT TREATMENT		DIRECTOR		SCALE		CODE	
APPLICATION		FINAL PROTECTIVE FINISH				UNIT WEIGHT		SHEET 6 OF 6	



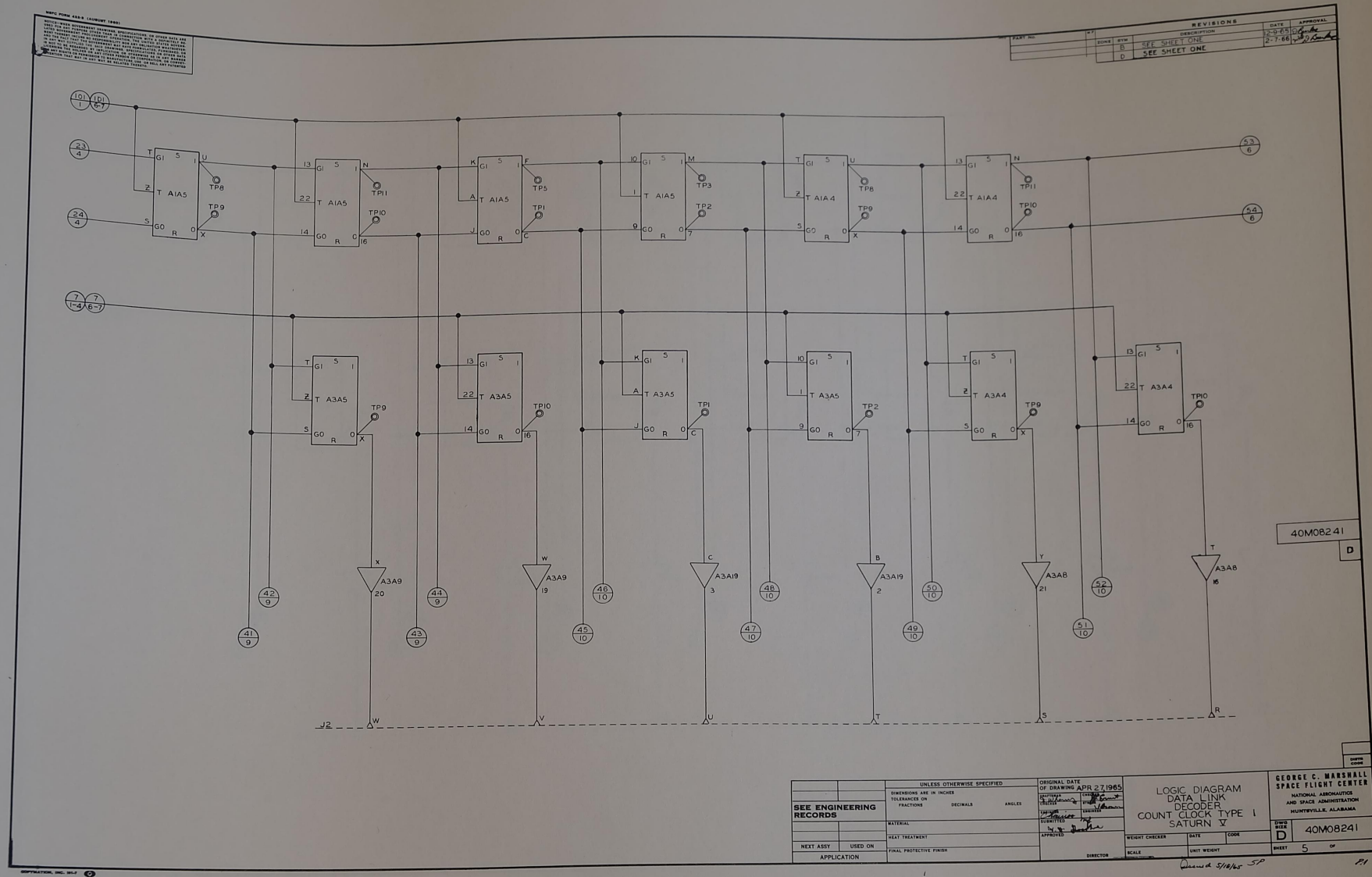




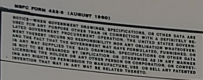


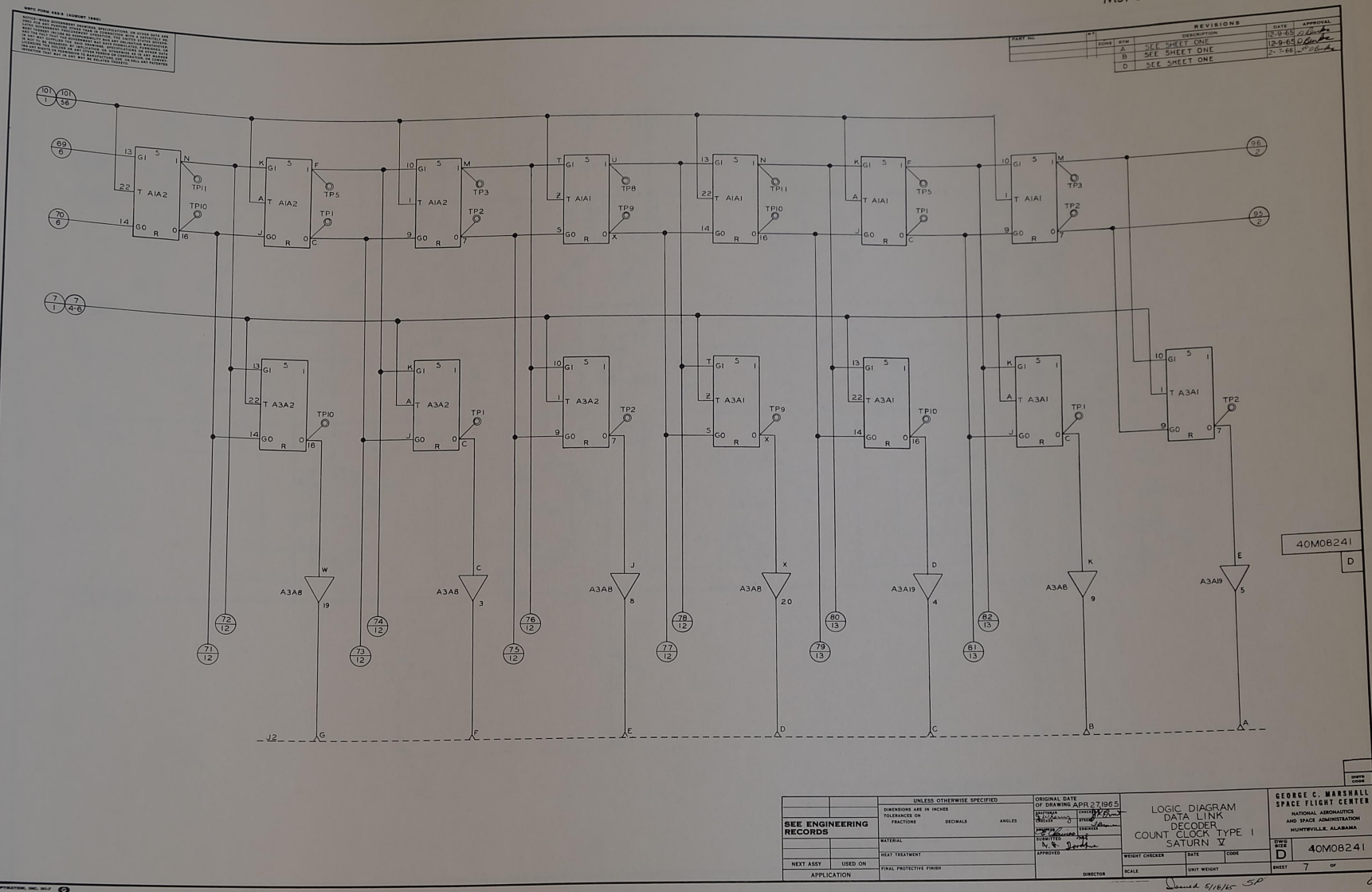
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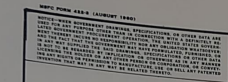
Change Date  
30 November, 1966



Change Date  
30 November, 1966







			REVISIONS		DATE	APPROVAL
PART NO.	QTY	ZONE	SYM	DESCRIPTION		
			A	SEE SHEET ONE	2-9-65	<i>D. Gandy</i>
			B	SEE SHEET ONE	2-9-65	<i>D. Gandy</i>
			D	SEE SHEET ONE	2-7-66	<i>D. Gandy</i>

40M08241

GEORGE C. MARSHALL  
SPACE FLIGHT CENTER  
NATIONAL AERONAUTICS  
AND SPACE ADMINISTRATION  
HUNTSVILLE, ALABAMA

DWG  
SIZE  
D

40M08241

LOGIC DIAGRAM  
DATA LINK  
DECODER  
COUNT CLOCK TYPE  
SATURN V

WEIGHT CHECKER	DATE	CODE
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SCALE	UNIT WEIGHT
	1.15

Issued 5/14/65

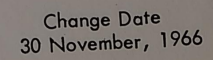
Change

30 Nov

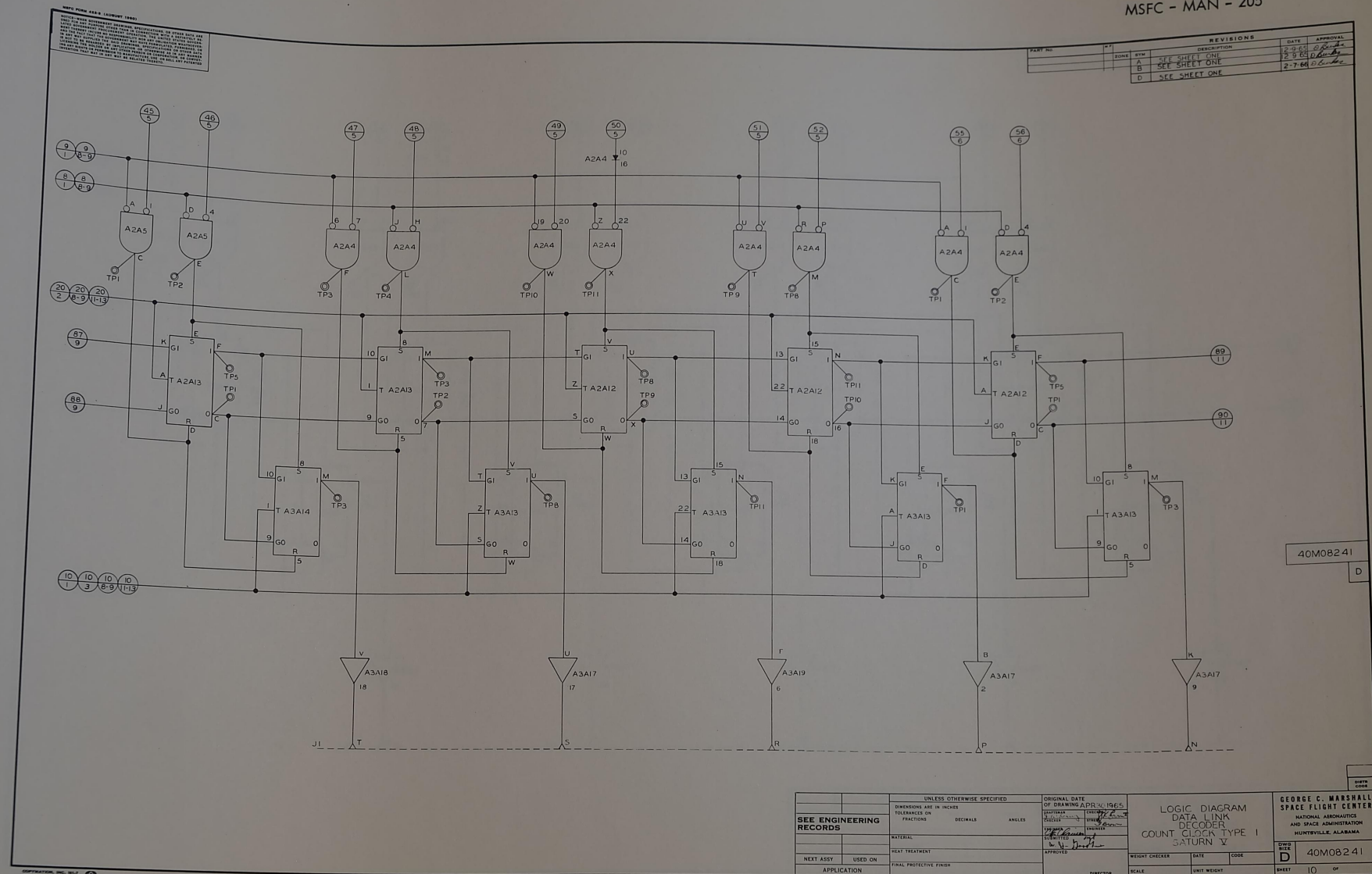
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Change Date  
30 November, 1966



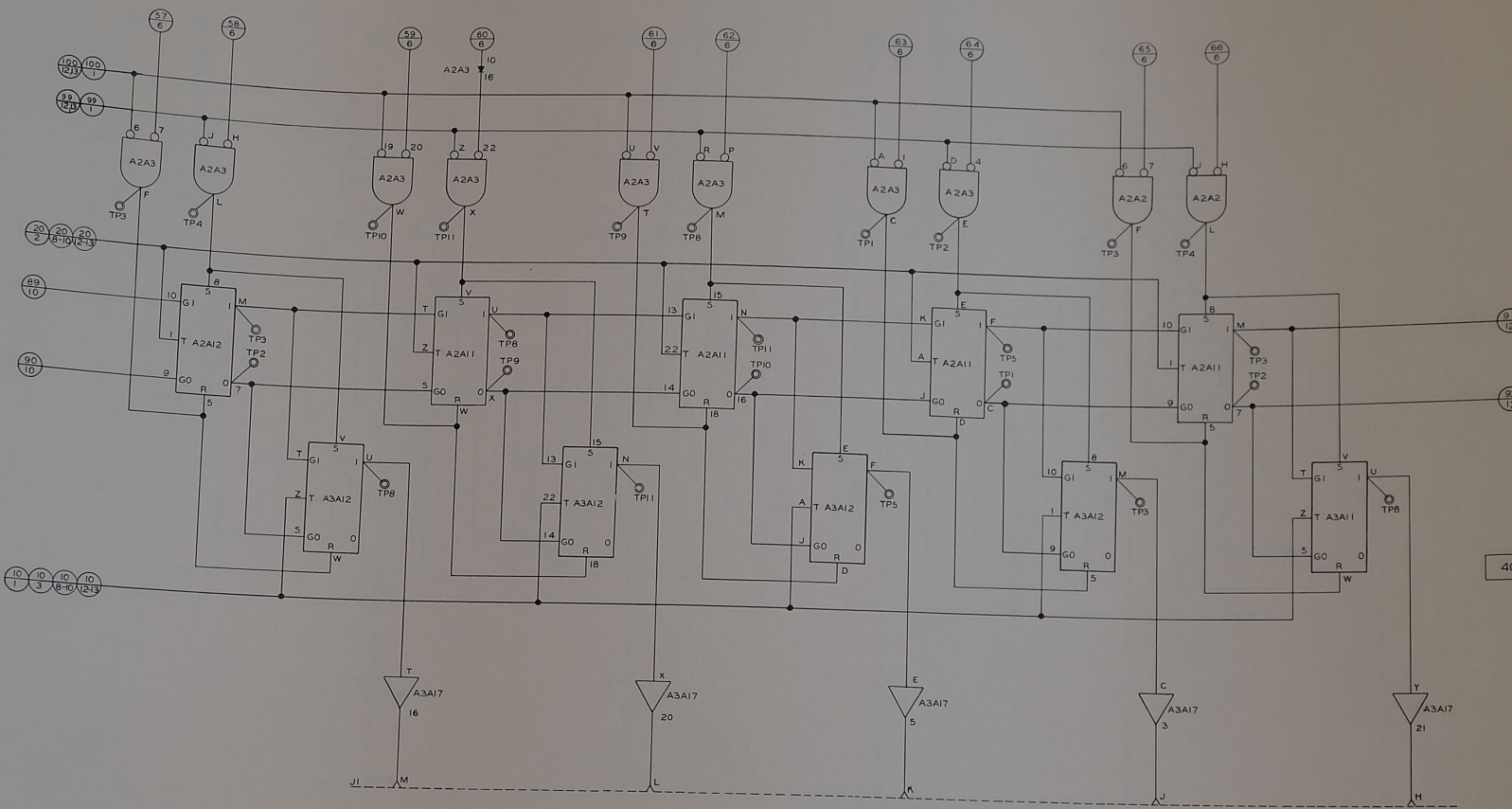
MSFC - MAN - 205



MSFC - MAN - 205

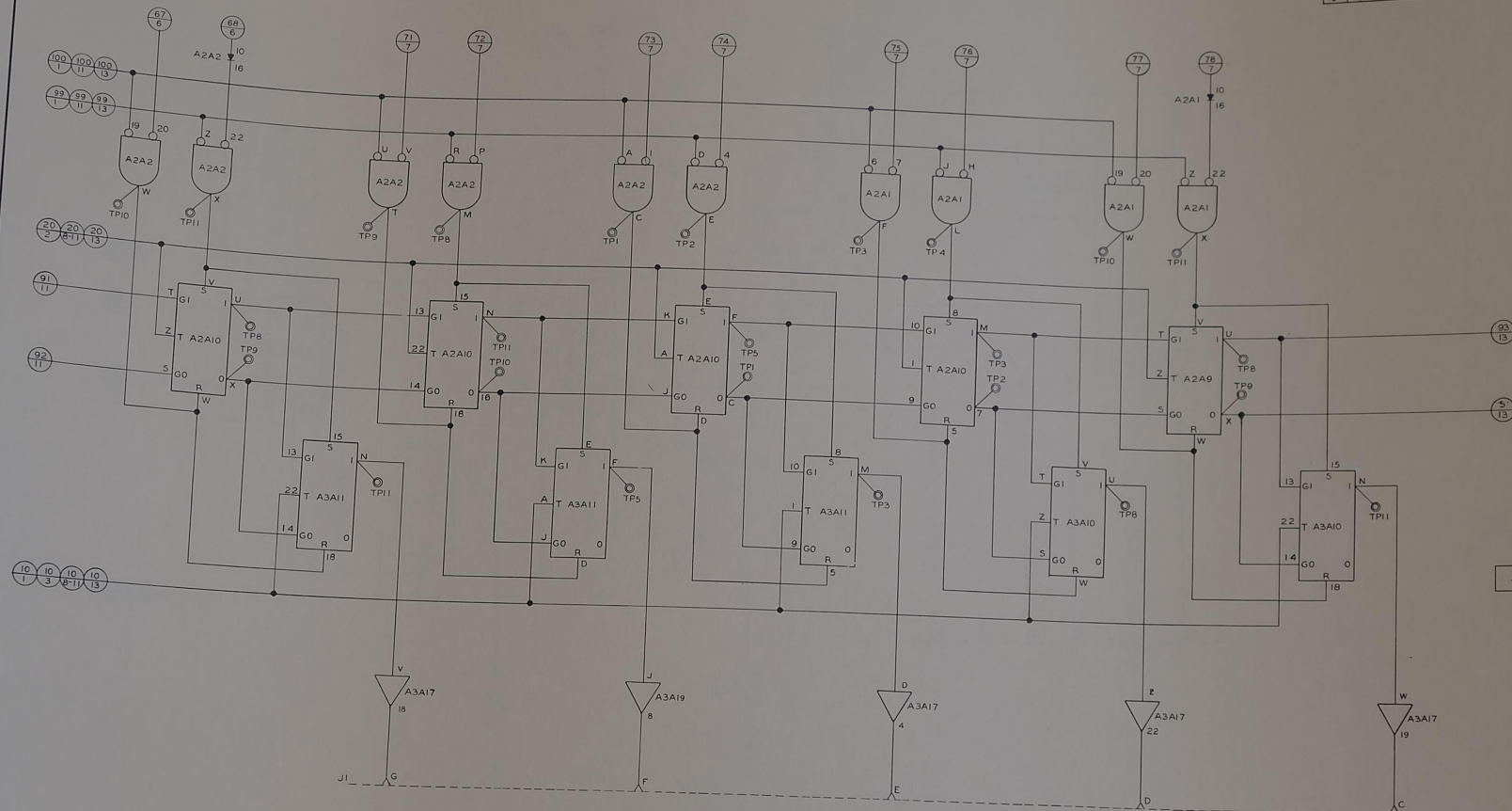
REC PINK 4440 (JANUARY 1960)

PART NO.		REVISIONS		DATE	APPROVAL
E	D	SEE SHEET ONE	SEE SHEET ONE	2-9-65	2-9-65
				2-7-66	2-7-66



40M08241

UNLESS OTHERWISE SPECIFIED					ORIGINAL DATE OF DRAWING APR 29 1965		LOGIC DIAGRAM DATA LINK DECODER COUNT CLOCK TYPE I SATURN V		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA		DRAWN BY DATE						
SEE ENGINEERING RECORDS	DIMENSIONS ARE IN INCHES		TOLERANCES ON FRACTIONS		DECIMALS	ANGLES	APPROVED DATE BY		WEIGHT CHECKER	DATE	CODE	UNIT WEIGHT	DIRECTOR	SCALE	UNIT WEIGHT	BIBET	OF
	MATERIAL		HEAT TREATMENT		APPROVED DATE BY												
	NEXT ASSY USED ON		FINAL PROTECTIVE FINISH		APPROVED DATE BY												
APPLICATION																	



PART NO.		REVISED		DATE	APPROVAL
		ZONE	SYM	DESCRIPTION	
		A		SEE SHEET ONE	2-9-66 <i>D. Burke</i>
		B		SEE SHEET ONE	2-9-66 <i>D. Burke</i>
		D		SEE SHEET ONE	2-7-66 <i>D. Burke</i>

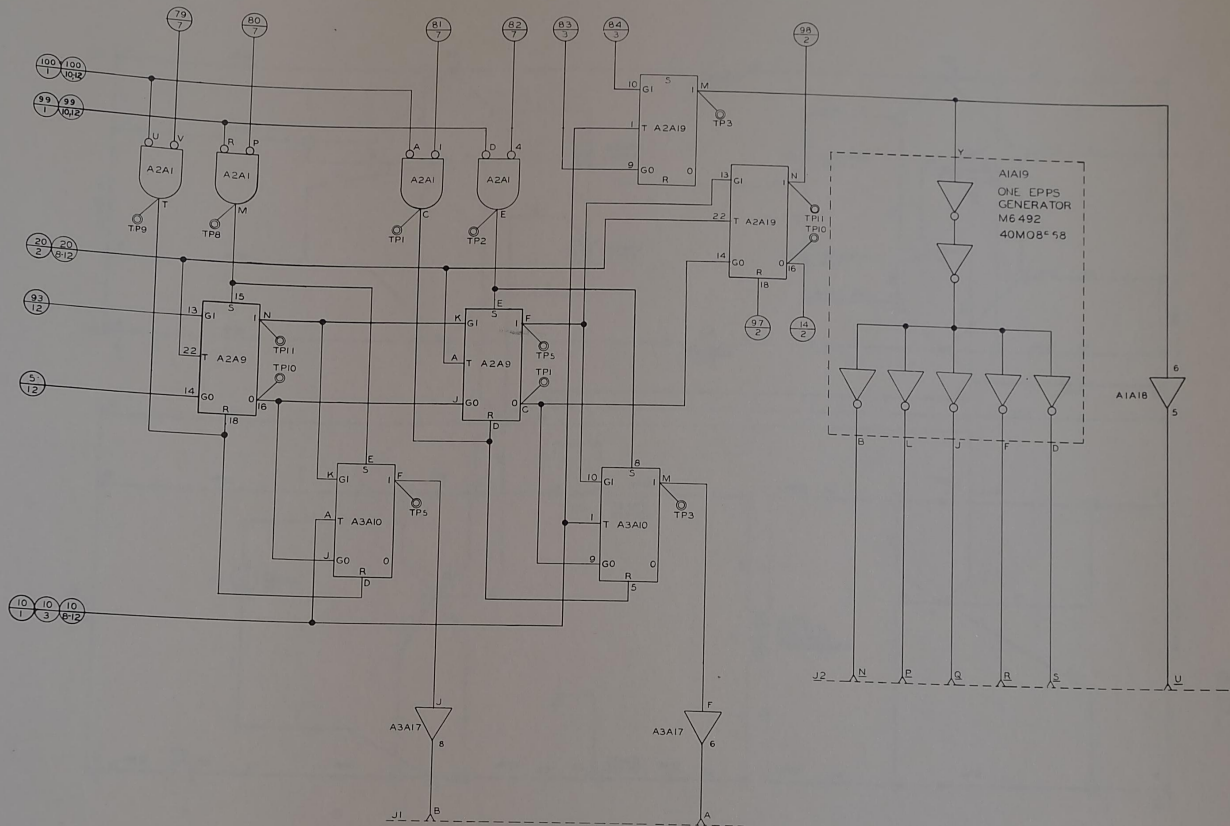
40M08241

D

SEE ENGINEERING RECORDS		UNLESS OTHERWISE SPECIFIED:		ORIGINAL DATE OF DRAWING	LOGIC DIAGRAM DATA LINK DECODER COUNT CLOCK TYPE I SATURN V	GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
		DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS	DECIMALS	ANGLES			MAY 1965 DESIGNED BY: <i>[Signature]</i> CHECKED BY: <i>[Signature]</i> DRAWN BY: <i>[Signature]</i> APPROVED BY: <i>[Signature]</i>
NEXT ASSY		MATERIAL	TREATMENT	FINAL PROTECTIVE FINISH	WEIGHT CHECKER	DATE	CODE
APPLICATION					SCALE	UNIT WEIGHT	
					DIRECTOR		
					40M08241 REV 12 OF		

MSFC - MAN - 205

REVISIONS  
DATE APPROVAL  
A 12-10-63  
B 12-9-63  
C 12-10-63  
D 12-10-63



40M08241

D

UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING	LOGIC DIAGRAM DATA LINK DECODER COUNT CLOCK TYPE I SATURN IV		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
SEE ENGINEERING RECORDS	DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	TESTING 12-10-63	DESIGNED 12-10-63	APPROVED 12-10-63	DATE 12-10-63	CODE 40M08241
MATERIAL	HEAT TREATMENT	APPROVED	REVIEWED	REVIEWED	REVIEWED	REVIEWED
NEXT ASSY	USED ON	FINAL PROTECTIVE FINISH	WEIGHT CHECKER	DATE	CODE	WEIGHT
APPLICATION			SCALE	UNIT WEIGHT	DIRECTOR	SHEET 13 OF 13

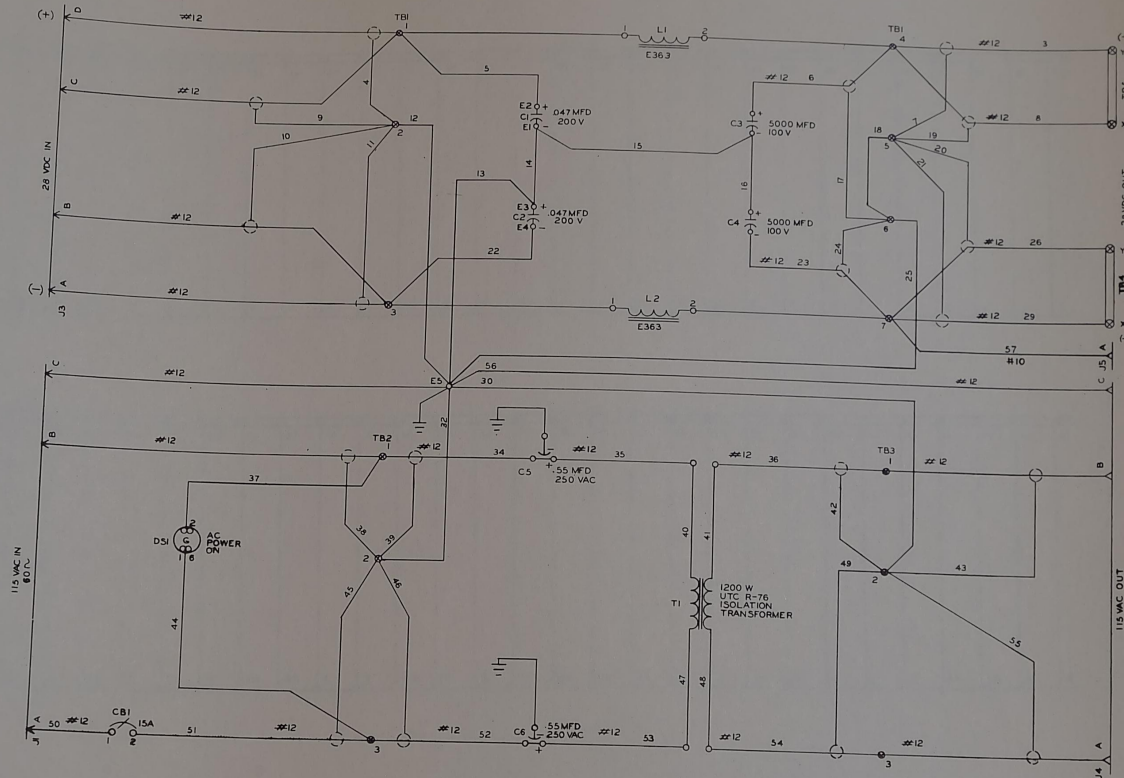
Revised 5/11/65 SP

MSFC - MAN - 205

REV	DATE	DESCRIPTION	APPROVAL
A	1-25-50	INC ED SP-217	
B	1-25-50	INC ED SP-224	
C	2-7-56	INC ED SP-224	
D	2-7-56	INC ED SP-224	
E	2-7-56	INC ED SP-224	
F	2-7-56	INC ED SP-224	

NOTES:

1. WIRE IN ACCORDANCE WITH STANDARD DWG 40M00200.
2. LAST WIRE NO. USED 57.
3. ALL WIRE TO BE #20 UNLESS OTHERWISE SPECIFIED.



40M08243

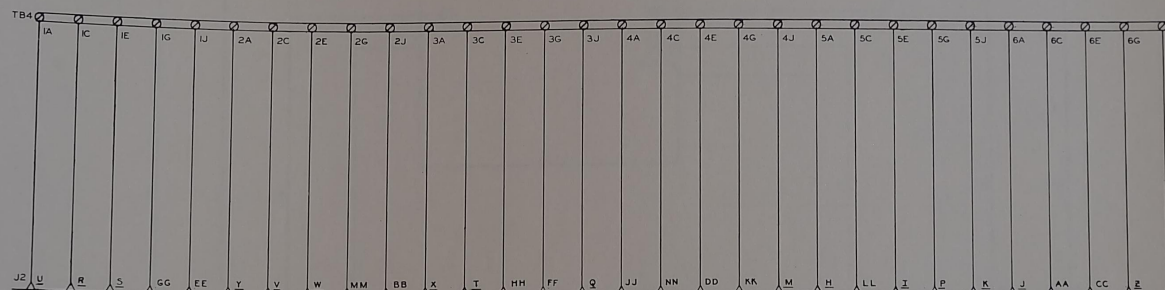
MOD KIT NO.	ECP NO.	DATE INC.
	09-550	
	10-553	

SEE ENGINEERING RECORDS		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING: 3-55		ADVANCED ELECTRICAL UNIT SCHEMATIC POWER FILTER TYPE I SATURN V		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
MATERIAL:		DIMENSIONS ARE IN INCHES		TOLERANCES ON FRACTIONS:		SCALE:		DWG NO. 40M08243	
NEXT TREATMENT:		DECIMALS:		ANGLES:		DATE:		SHEET 1 OF 2	
APPLICATION:		FINAL PROTECTIVE FINISH:		APPROVED:		UNIT WEIGHT:			

MSFC - MAN - 205

REVISIONS  
DATE  
APPROVAL  
DESCRIPTION  
INC TO SP-285  
EO SP-86A CANCELLED  
EO SP-590

PART NO.		REV	DATE	APPROVAL
C		INC TO SP-285	2-7-66	<i>[Signature]</i>
D		EO SP-86A CANCELLED	2-7-66	<i>[Signature]</i>
E		EO SP-590	8-2-66	<i>[Signature]</i>



40M08243  
E

UNLESS OTHERWISE SPECIFIED:		ORIGINAL DATE OF DRAWING APRIL 9, 65	ADVANCED ELECTRICAL UNIT SCHEMATIC POWER FILTER COUNT CLOCK TYPE I SATURN V	GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES		APPROVED <i>[Signature]</i> DIRECTOR		
SEE ENGINEERING RECORDS	MATERIAL	PREP TREATMENT	WEIGHT CHECKER	DATE
NEXT ASST	USED ON	FINAL PROTECTIVE FINISH	SCALE	CODE
APPLICATION			UNIT WEIGHT	SHEET 2 OF 2

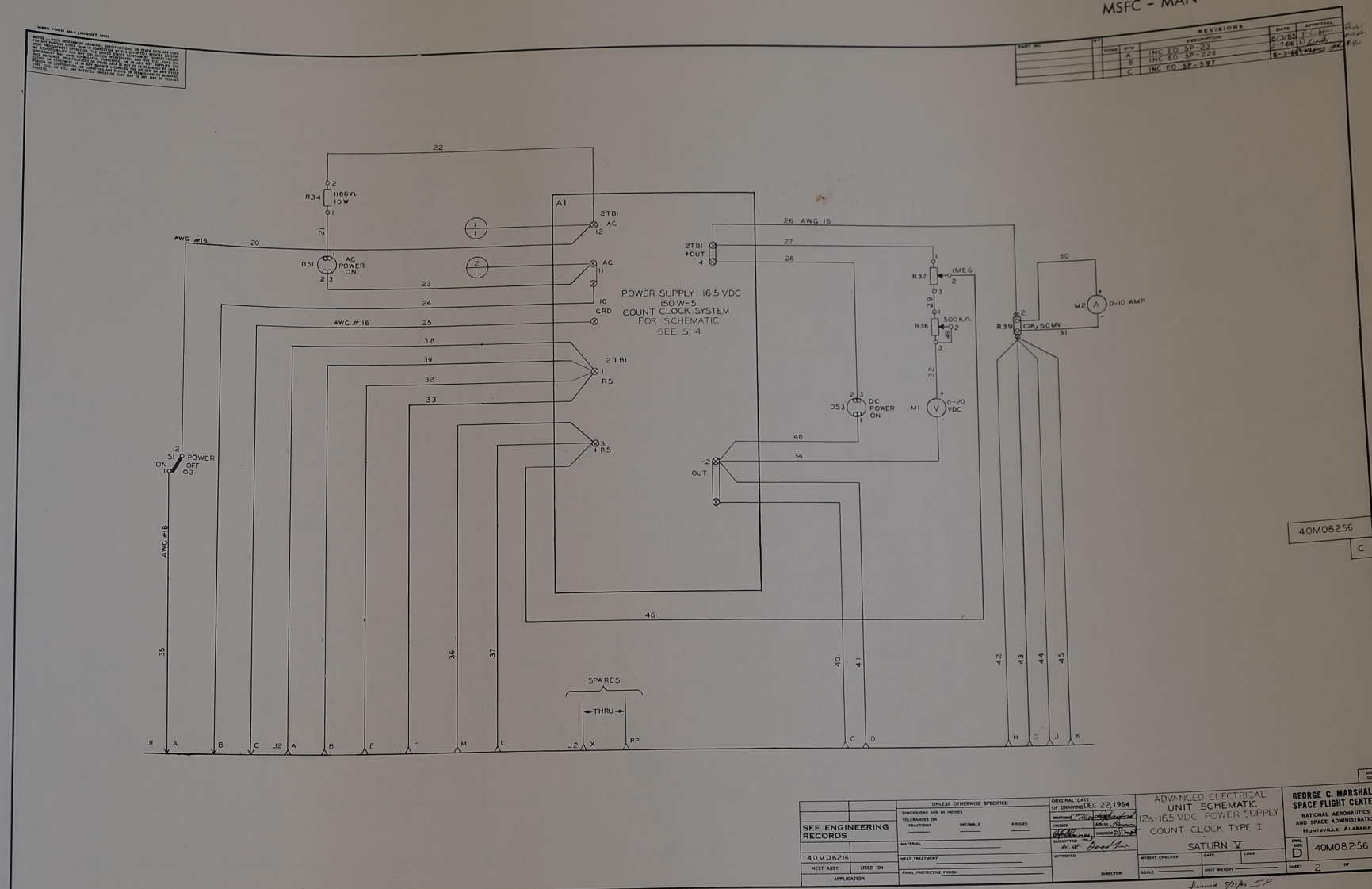
Change Date  
30 November, 1966

$$MSFC = MAN = 205$$

AGABE

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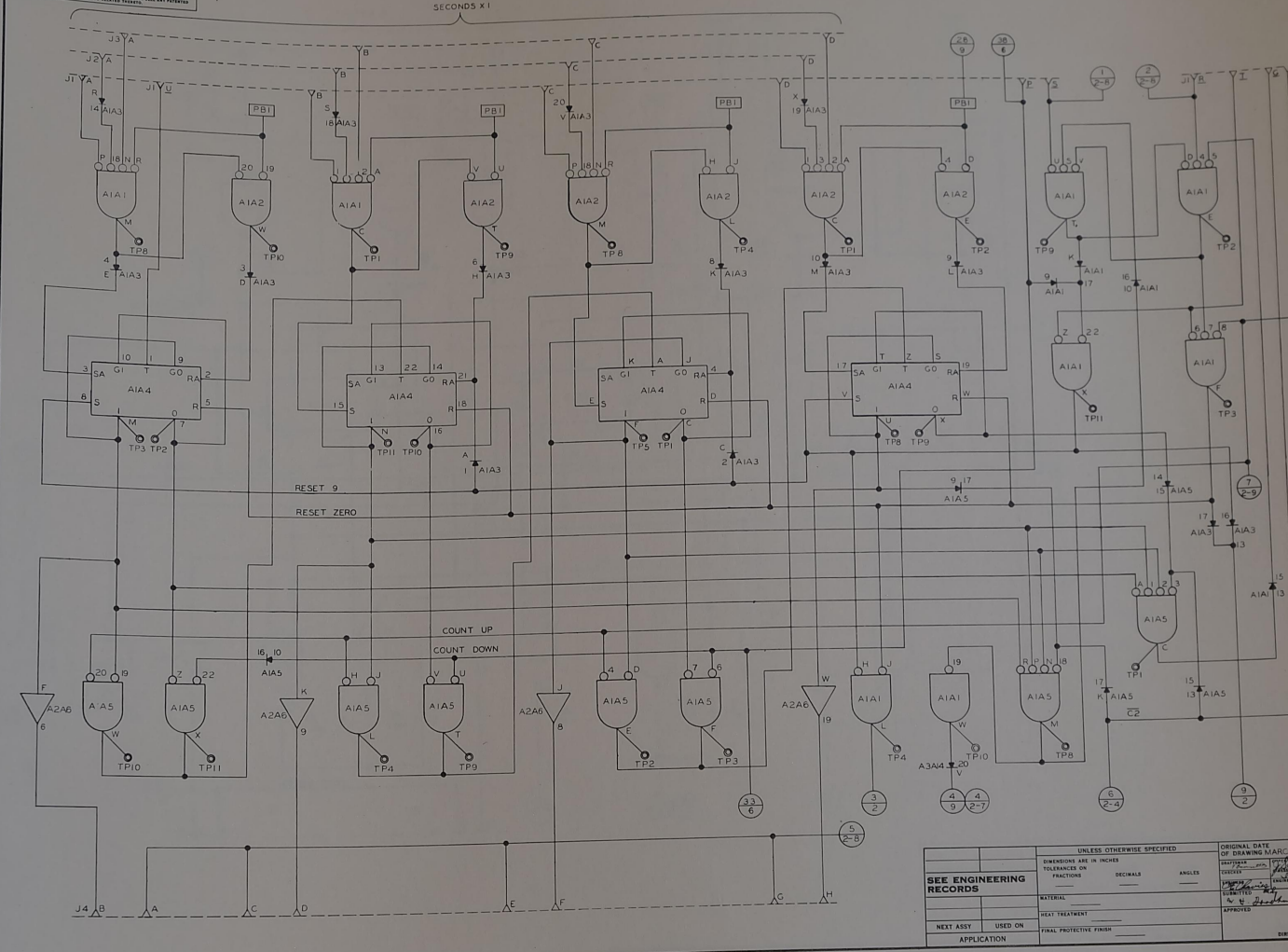
Change Date  
30 November, 1966



MSFC FORM 412-1 (AUGUST 1964)

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REV	DATE	APPROVAL
A	2-9-65	1-1-65
B	12-9-65	1-1-66
C	2-9-66	1-1-66
D	2-9-66	1-1-66
E	1-1-66	1-1-66



- NOTES
1. LAST BUBBLE NUMBER USED IS 39.
  2. REFERENCE DRAWINGS: WIRING LIST 40M08264.
  3. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER AND ASSEMBLY DESIGNATION (S).

40M08274

ESR

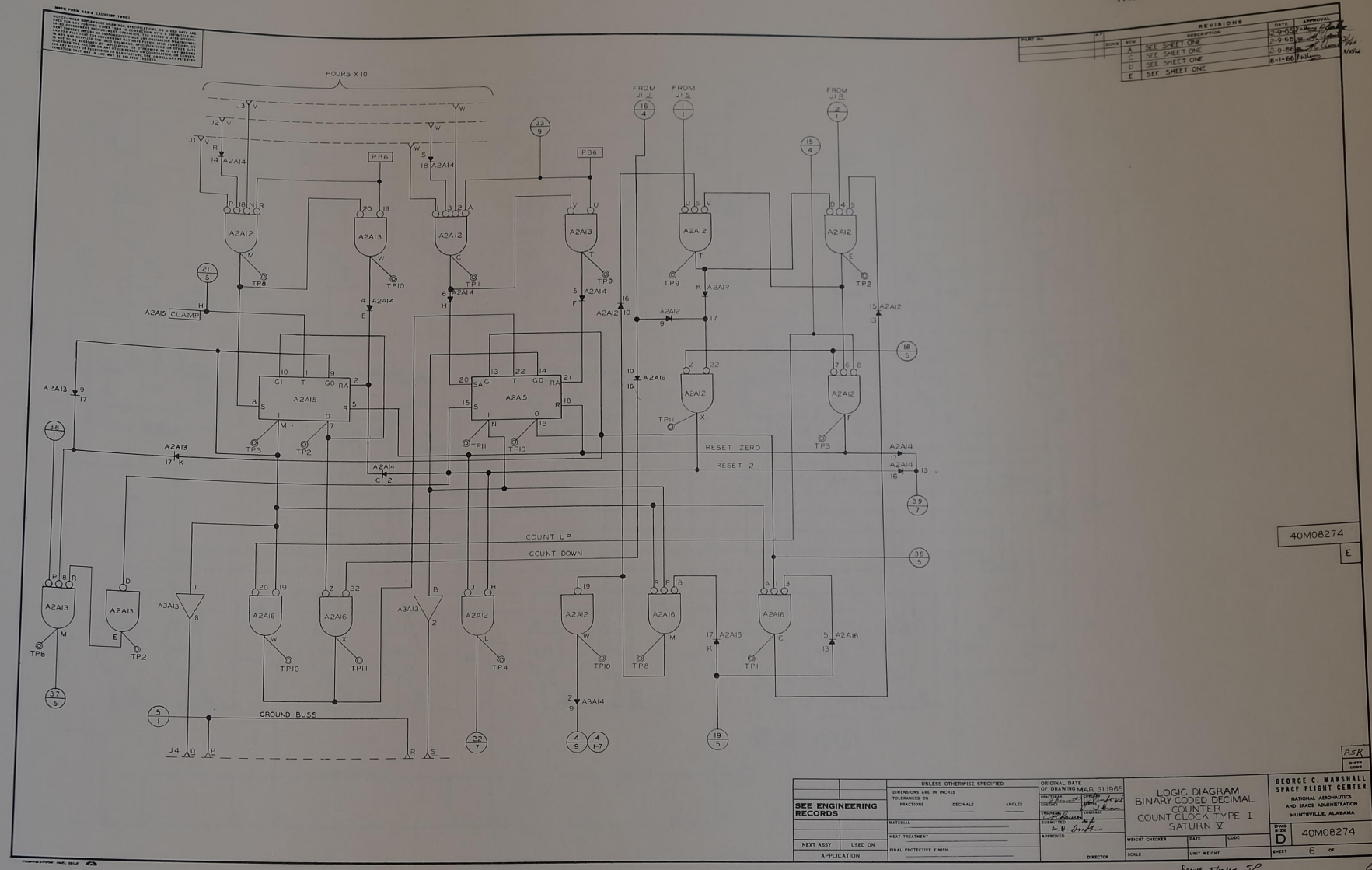
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DIMENSIONS ARE IN INCHES		
TOLERANCES ON		
FRACTIONS	DECIMALS	ANGLES
MATERIAL		DATE
NEXT TREATMENT		APPROVED
NEXT ASSY USED ON		DIRECTOR
APPLICATION		

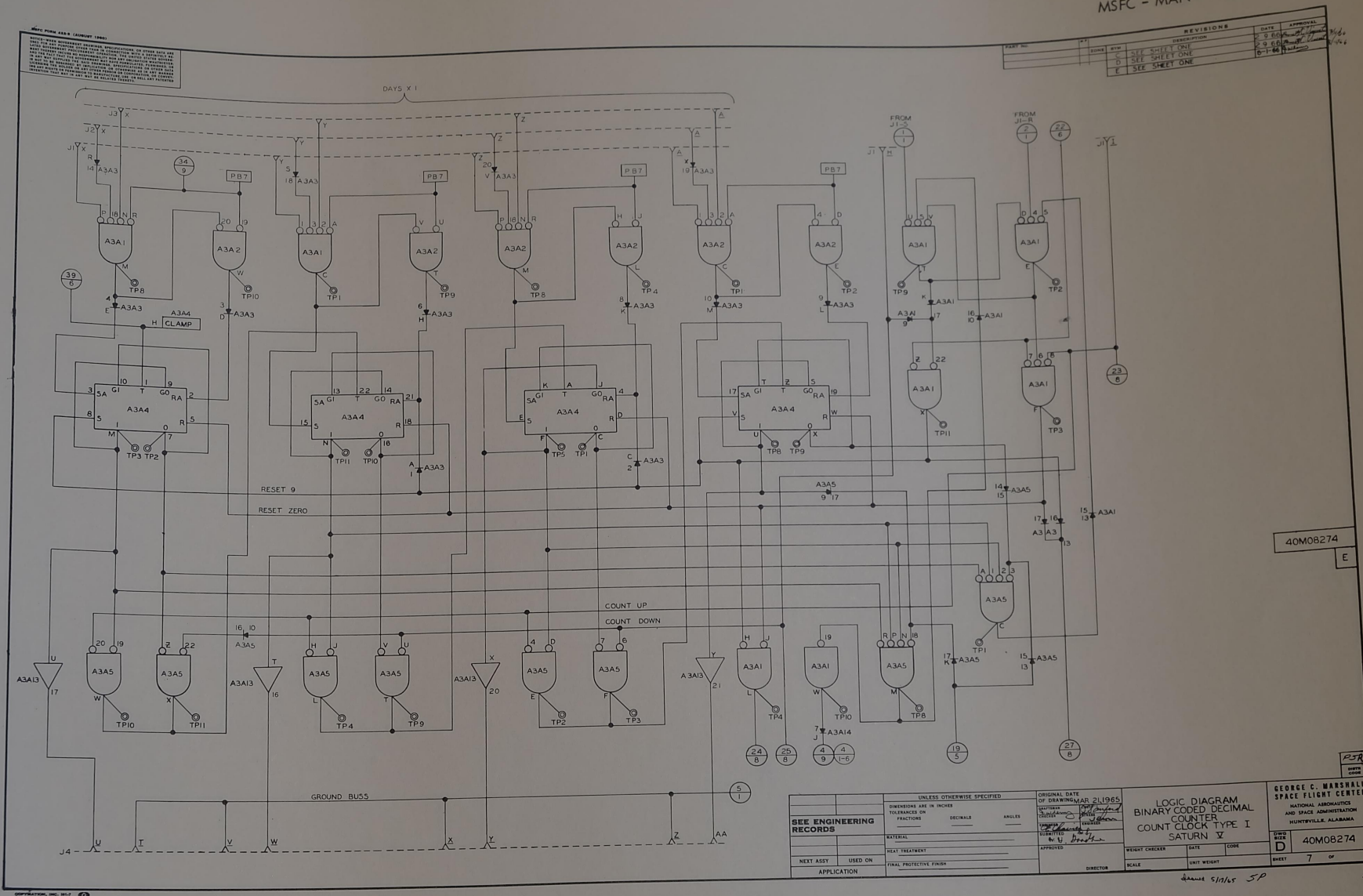
LOGIC DIAGRAM BINARY CODED DECIMAL COUNTER COUNT CLOCK TYPE I SATURN V	
WEIGHT CHECKER	DATE
SCALE	UNIT WEIGHT

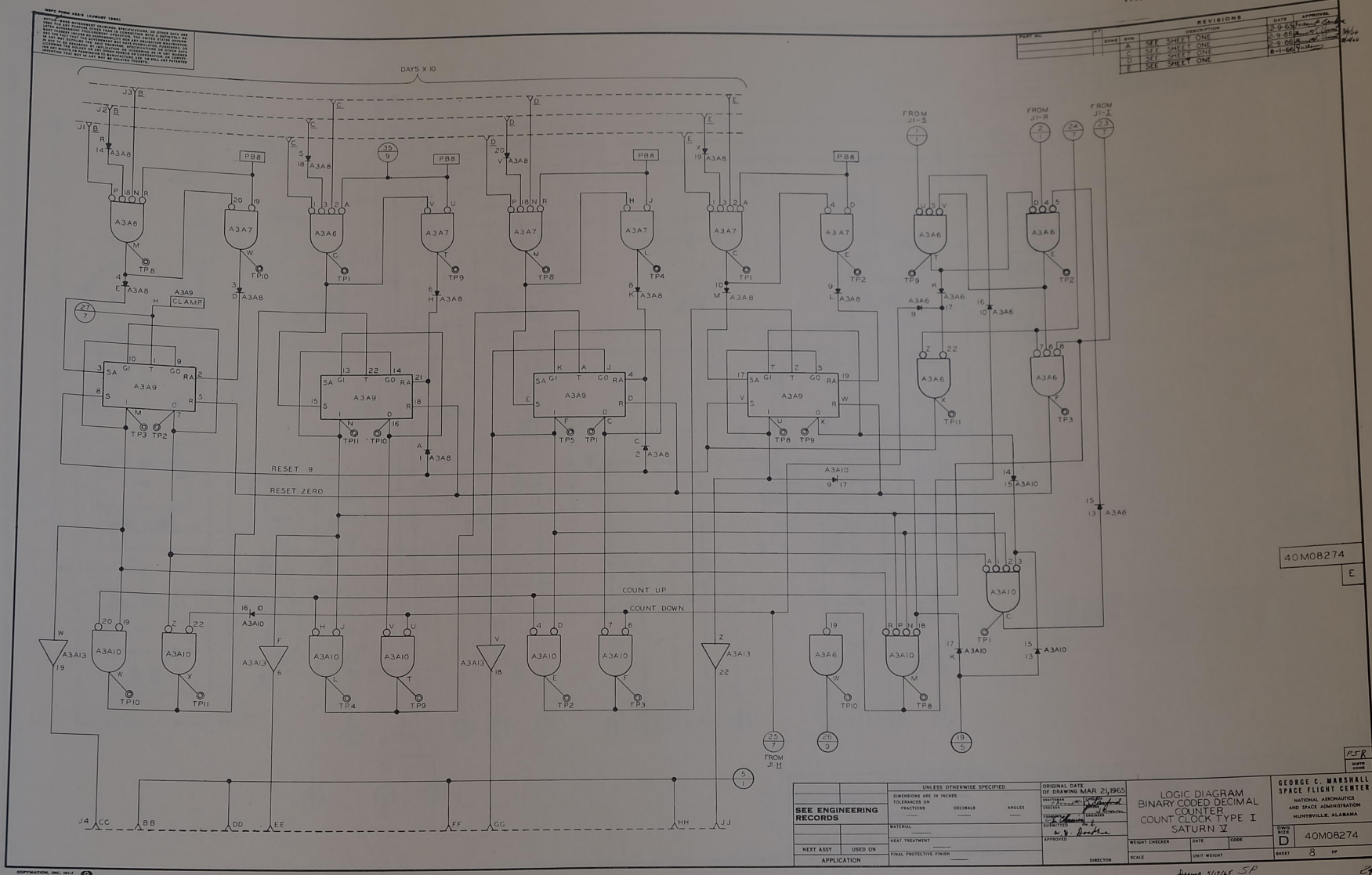
GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
DWG NO	40M08274
SHEET	1 OF 9

Change Date  
30 November, 1966

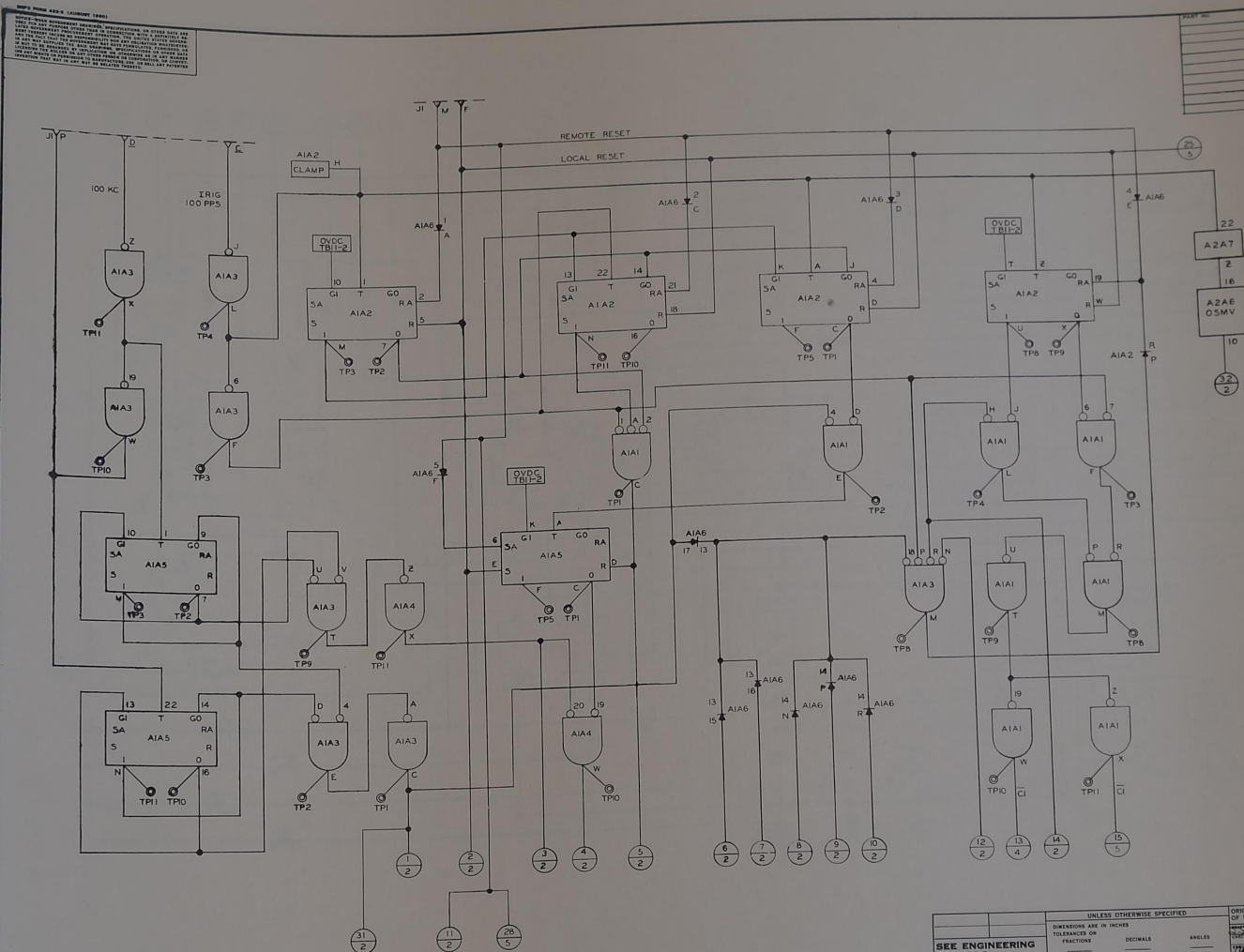
MSFC - MAN - 205







UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
TOLERANCES ON FRACTIONS  
TOLERANCES ON DECIMALS  
TOLERANCES ON ANGLES  
MATERIAL  
NEXT TREATMENT  
NEXT ASSY USED ON  
APPLICATION



- NOTES:
1. LAST BALLOON NUMBER USED IS 32.
  2. REFERENCE DRAWING: WIRING LIST 40M08263.
  3. PARTIAL REFERENCE DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER AND ASSEMBLY DESIGNATION.
  4. FOR ASSEMBLY DWG 40M08209.

MOD KIT NO.	ECP NO.	DATE INC
40M17200	09-484	
40M17200	10-402	
	09-485	
	10-403	

40M08275  
H

SEE ENGINEERING RECORDS	UNLESS OTHERWISE SPECIFIED	ORIGINAL DATE OF DRAWING: APRIL 3, 65	LOGIC DIAGRAM SYNCHRONIZE & CONTROL COUNT CLOCK TYPE I SATURN V	GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA
	DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS TOLERANCES ON DECIMALS TOLERANCES ON ANGLES	APPROVED: [Signature]		
	MATERIAL	DATE: 5/17/65		
	NEXT TREATMENT	CODE		
NEXT ASSY USED ON	FINAL PROTECTIVE FINISH	DIRECTOR	WEIGHT CHECKER	SCALE
APPLICATION			DATE	UNIT WEIGHT

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40M08275  
1 of 6

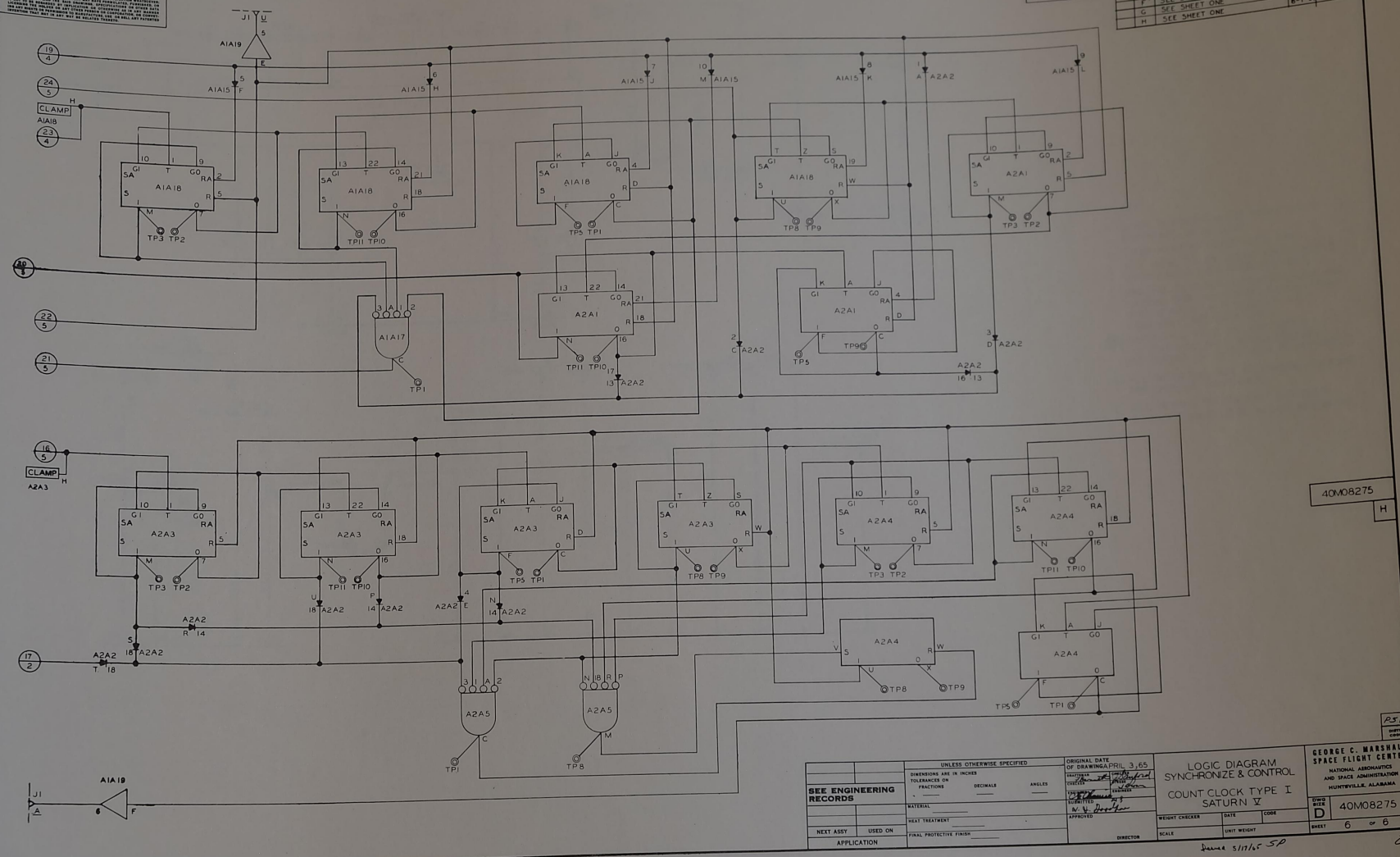


Change Date  
30 November, 1966

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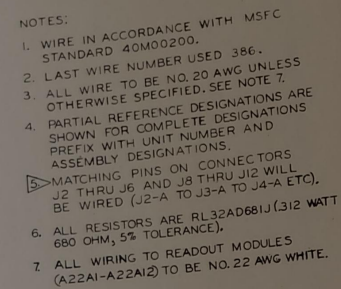
NOTE: THIS DRAWING IS A REVISION OF THE PREVIOUS EDITION. IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE EFFECT OF THIS REVISION ON THE DESIGN OF THE SYSTEM. THE USER SHOULD CONSULT THE PREVIOUS EDITION OF THIS DRAWING FOR A COMPLETE UNDERSTANDING OF THE SYSTEM. THE USER SHOULD ALSO CONSULT THE REVISIONS LIST FOR A COMPLETE UNDERSTANDING OF THE REVISIONS. THE USER SHOULD ALSO CONSULT THE REVISIONS LIST FOR A COMPLETE UNDERSTANDING OF THE REVISIONS.

REV	DATE	APPROVAL
1	2-1-64	W. L. B. [Signature]
2	2-1-64	W. L. B. [Signature]
3	2-1-64	W. L. B. [Signature]
4	2-1-64	W. L. B. [Signature]
5	2-1-64	W. L. B. [Signature]
6	2-1-64	W. L. B. [Signature]
7	2-1-64	W. L. B. [Signature]
8	2-1-64	W. L. B. [Signature]
9	2-1-64	W. L. B. [Signature]
10	2-1-64	W. L. B. [Signature]
11	2-1-64	W. L. B. [Signature]
12	2-1-64	W. L. B. [Signature]
13	2-1-64	W. L. B. [Signature]
14	2-1-64	W. L. B. [Signature]
15	2-1-64	W. L. B. [Signature]
16	2-1-64	W. L. B. [Signature]
17	2-1-64	W. L. B. [Signature]
18	2-1-64	W. L. B. [Signature]
19	2-1-64	W. L. B. [Signature]
20	2-1-64	W. L. B. [Signature]
21	2-1-64	W. L. B. [Signature]
22	2-1-64	W. L. B. [Signature]
23	2-1-64	W. L. B. [Signature]
24	2-1-64	W. L. B. [Signature]
25	2-1-64	W. L. B. [Signature]
26	2-1-64	W. L. B. [Signature]
27	2-1-64	W. L. B. [Signature]
28	2-1-64	W. L. B. [Signature]
29	2-1-64	W. L. B. [Signature]
30	2-1-64	W. L. B. [Signature]



SEE ENGINEERING RECORDS		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING: APRIL 3, 1965		LOGIC DIAGRAM SYNCHRONIZE & CONTROL COUNT CLOCK TYPE I SATURN V		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
MATERIAL		TOLERANCES ARE IN INCHES		DRAWN BY: [Signature]		CHECKED BY: [Signature]		APPROVED BY: [Signature]	
HEAT TREATMENT		FRACTION		DATE		SCALE		SHEET 6 OF 6	
NEXT ASSY		DECIMALS		APPROVED		DIRECTOR		DATE 5/17/65 SP	
APPLICATION		ANGLES		DATE		SCALE		SHEET 6 OF 6	
FINAL PROTECTIVE FINISH		TOLERANCES ARE IN INCHES		DATE		SCALE		SHEET 6 OF 6	

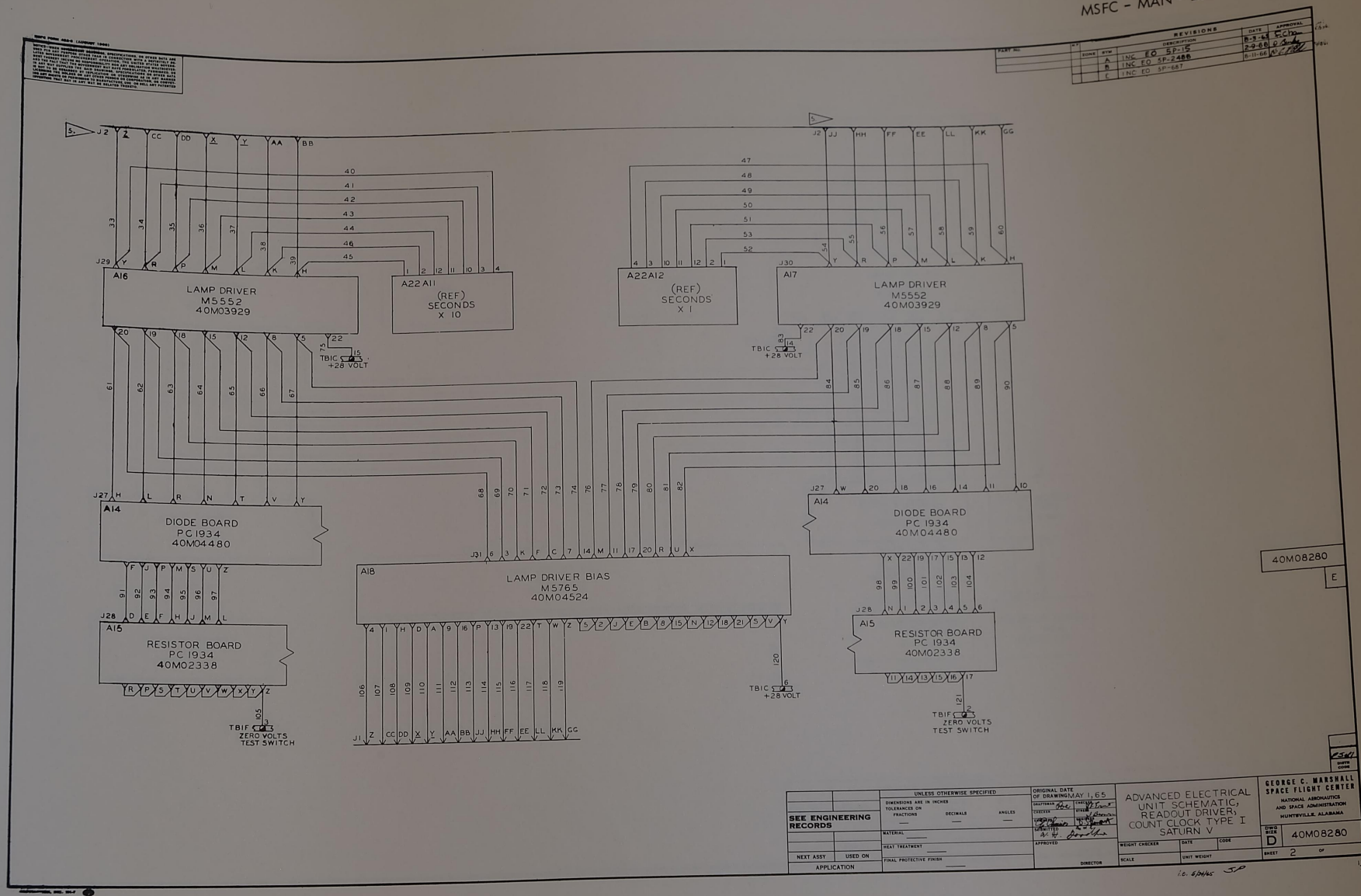
Change Date  
30 November, 1966



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Change Date  
30 November, 1966

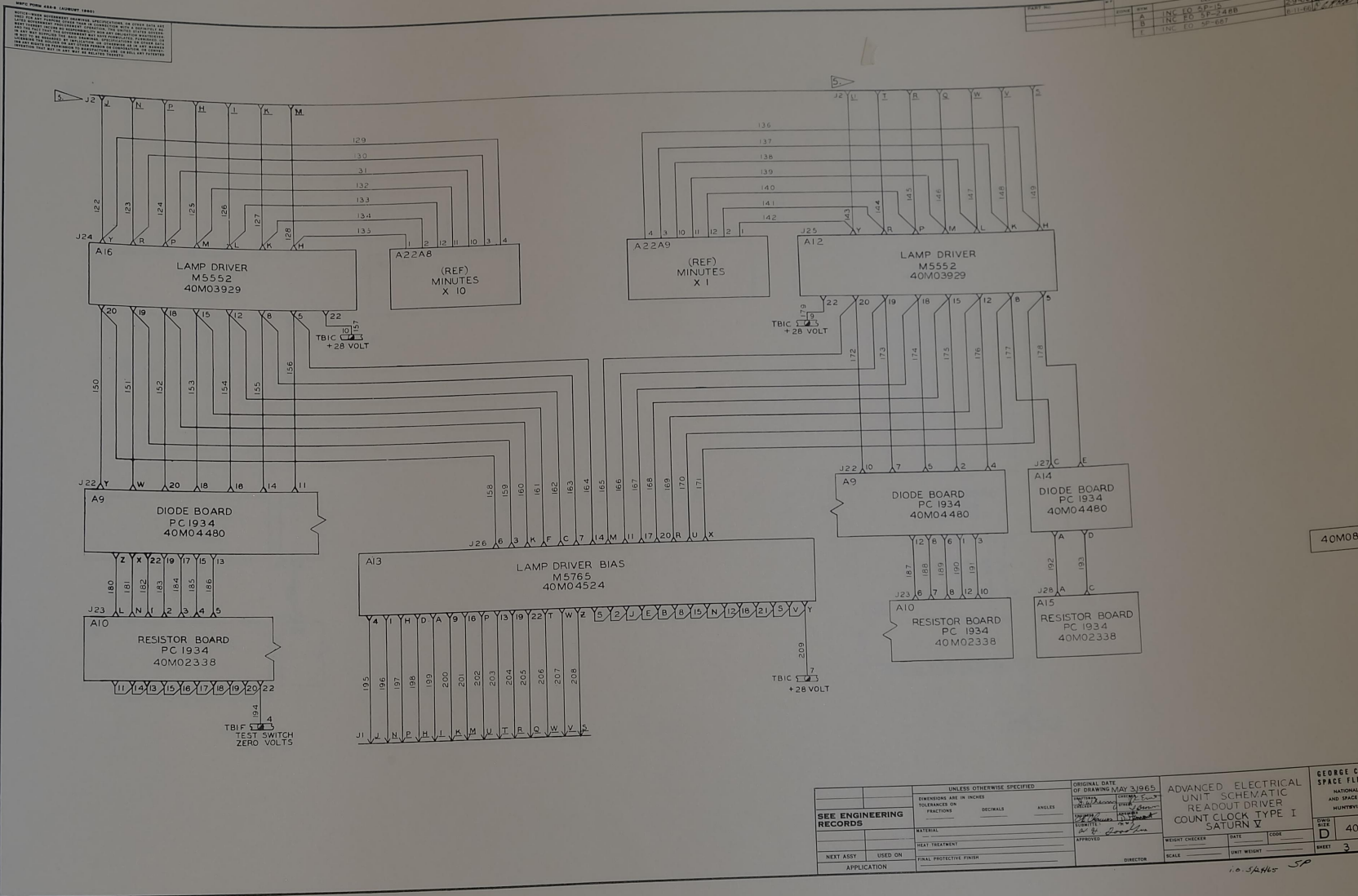
MSFC - MAN - 205



Change Date  
30 November, 1966

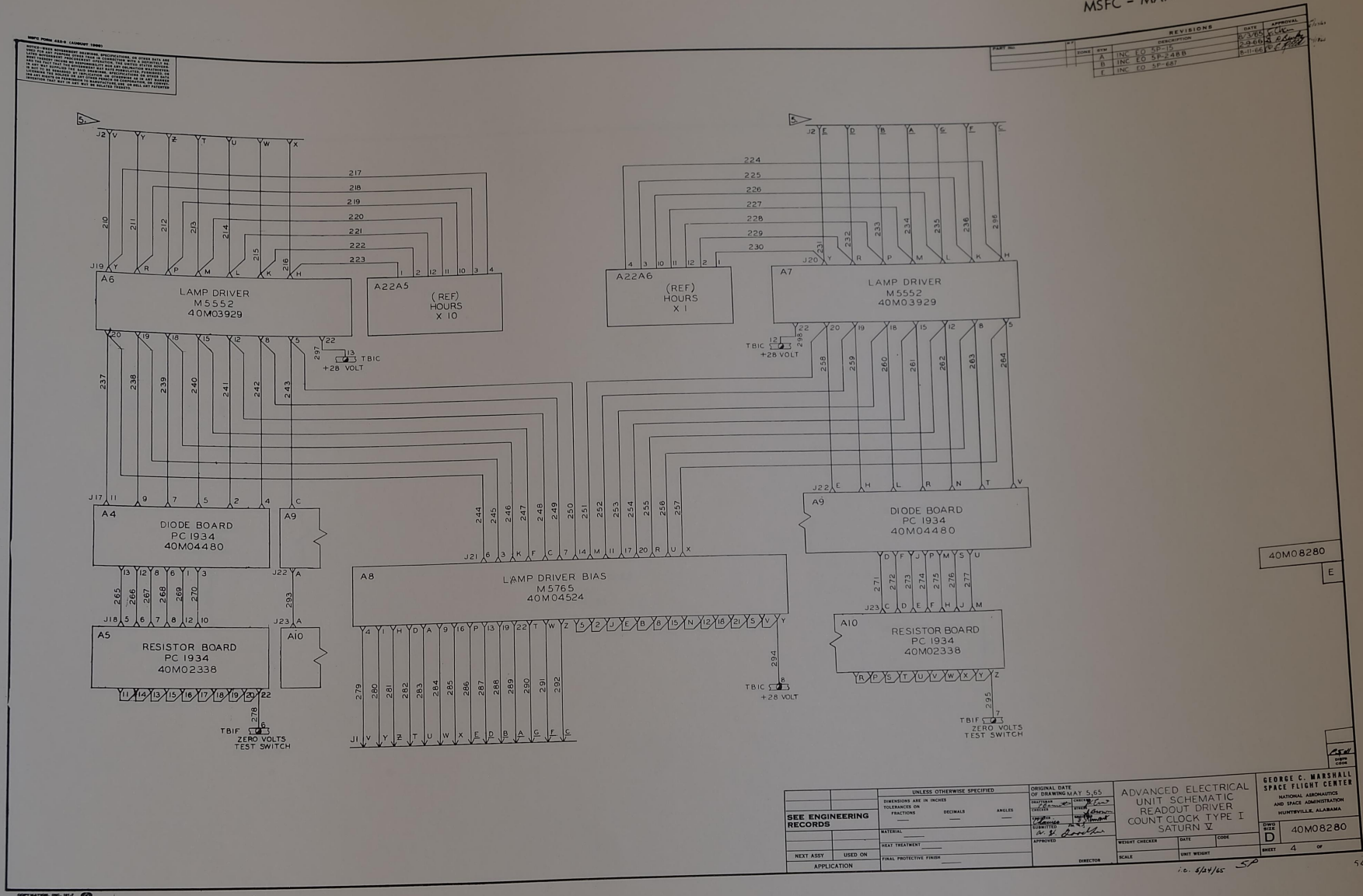
MSFC - MAN - 205

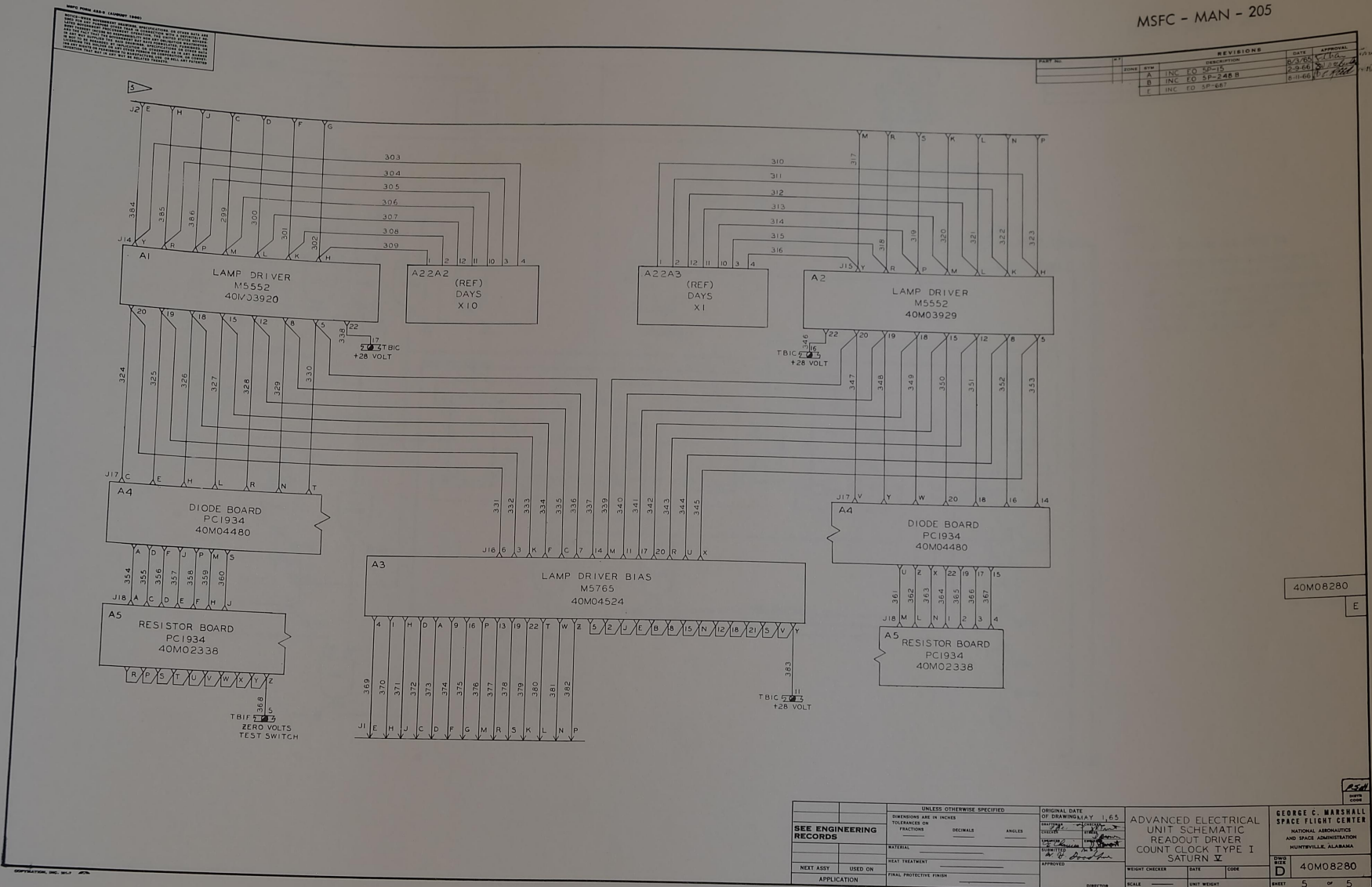
MSFC FORM 44-1 (JANUARY 1960)



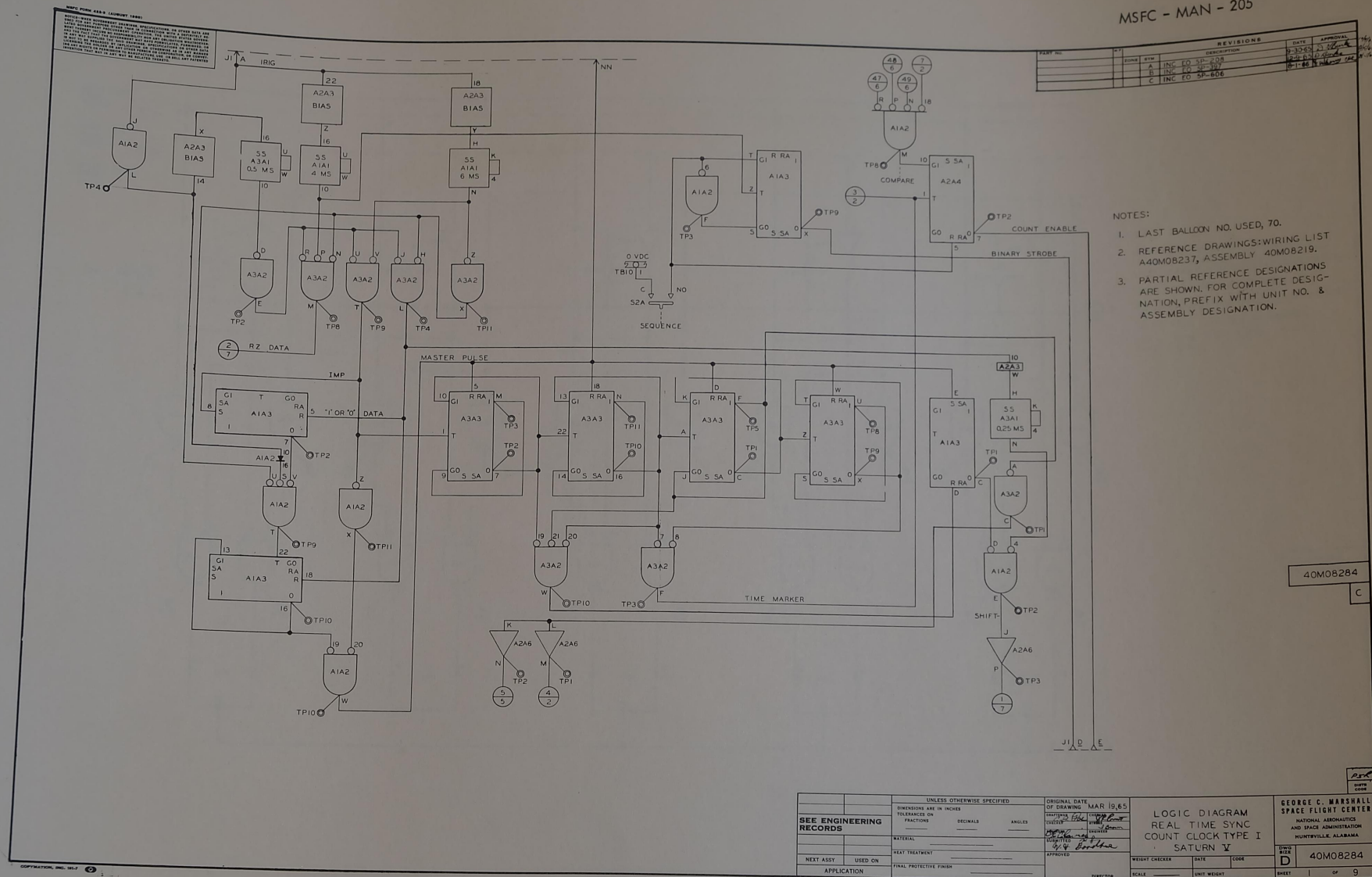
SEE ENGINEERING RECORDS		UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING MAY 3 1965		ADVANCED ELECTRICAL UNIT SCHEMATIC READOUT DRIVER COUNT CLOCK TYPE I SATURN V		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS		DECIMALS ANGLES		APPROVED		WEIGHT CHECKER		DATE	
MATERIAL		HEAT TREATMENT		DIRECTOR		SCALE		UNIT WEIGHT	
NEXT ASSY		USED ON		APPLICATION		FINAL PROTECTIVE FINISH		SHEET 3 OF 3	

Change Date  
30 November, 1966





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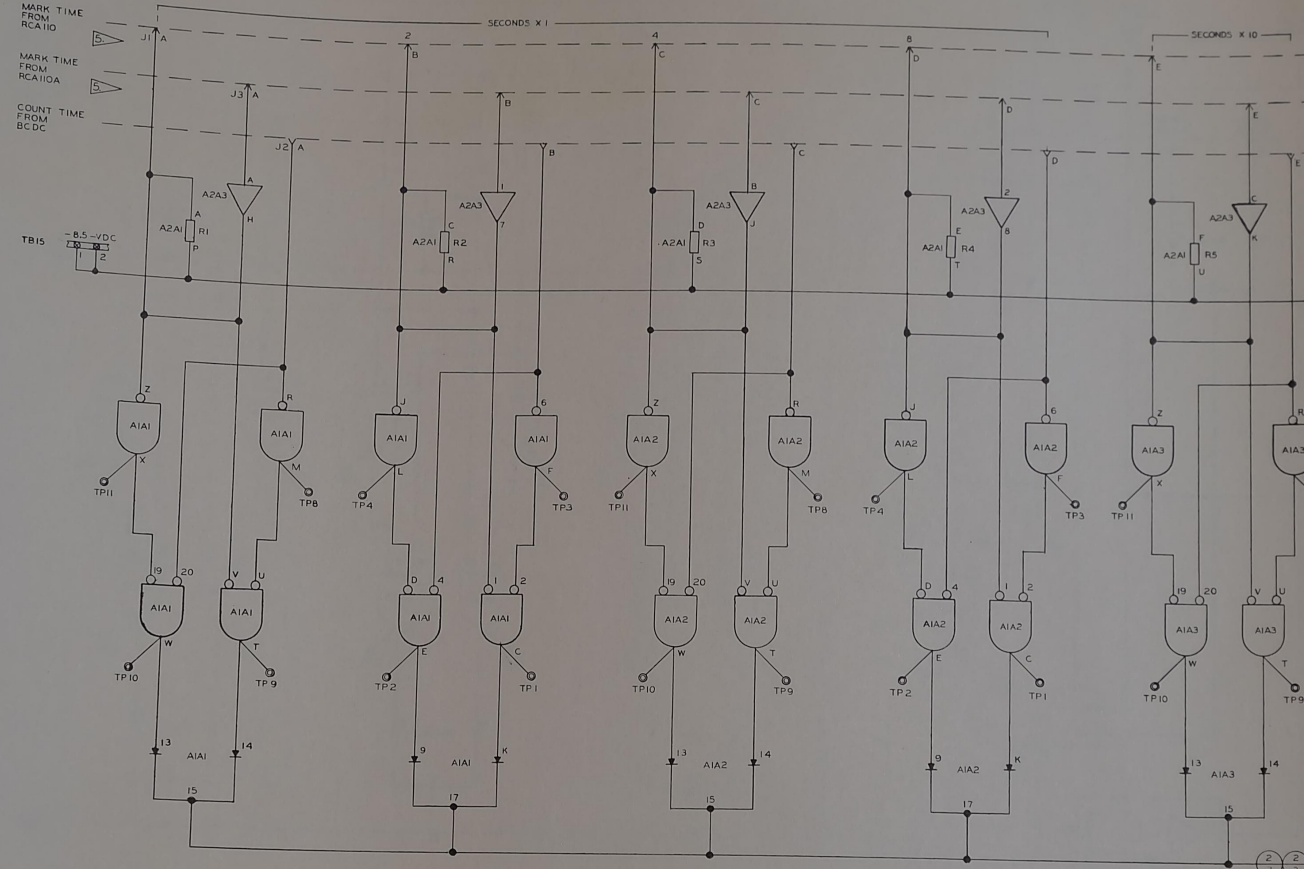


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WIRING DIAGRAM (AUGUST 1965)

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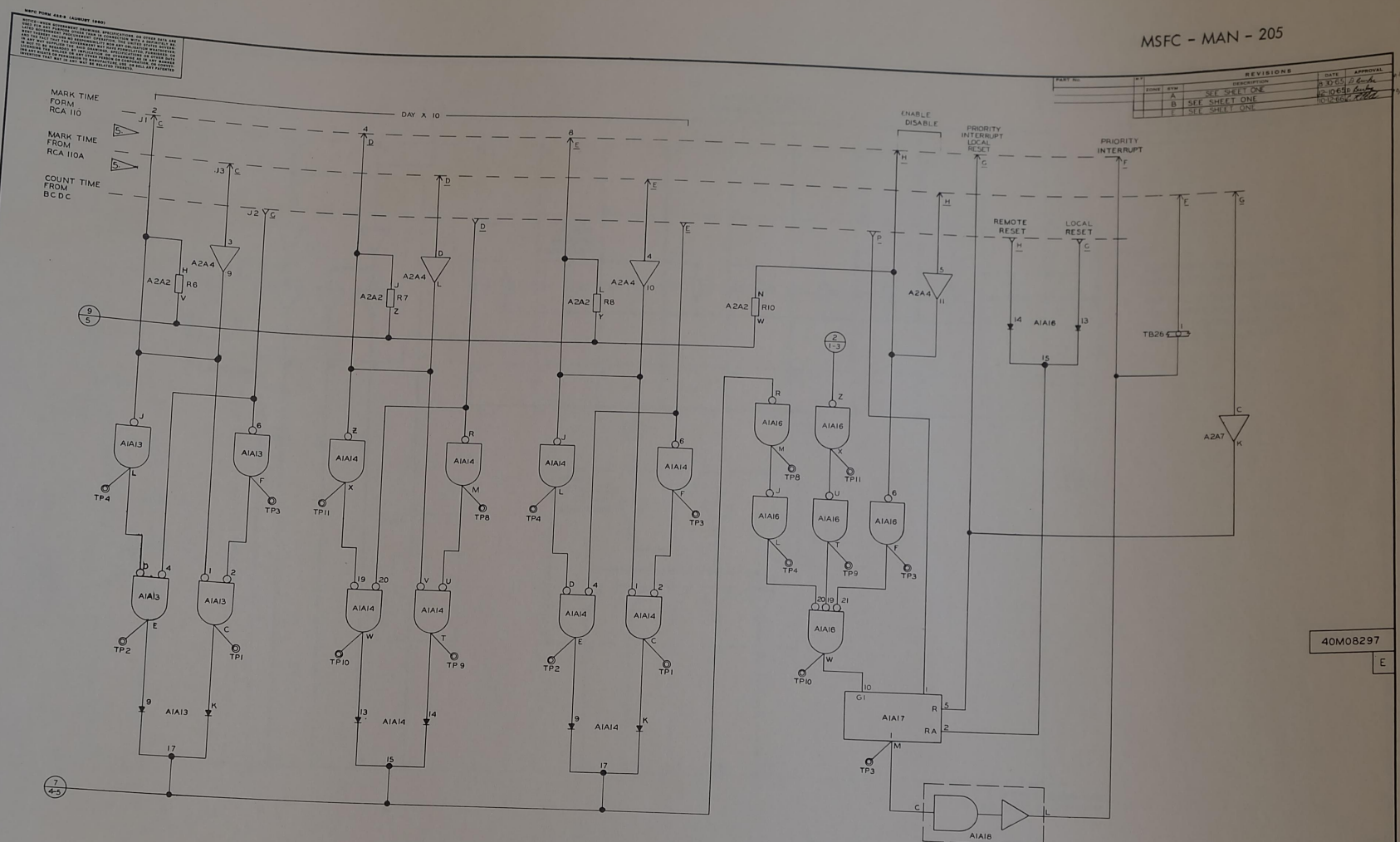
REVISIONS			
NO.	DATE	APPROVAL	REVISION
A	10-30-65	[Signature]	INC. ED. SP-79
B	12-10-65	[Signature]	REVISED TO REFLECT SP-234A
C	12-10-65	[Signature]	INC. ED. SP-416
D	2-2-66	[Signature]	INC. ED. SP-556
E	10-30-66	[Signature]	INC. ED. SP-710



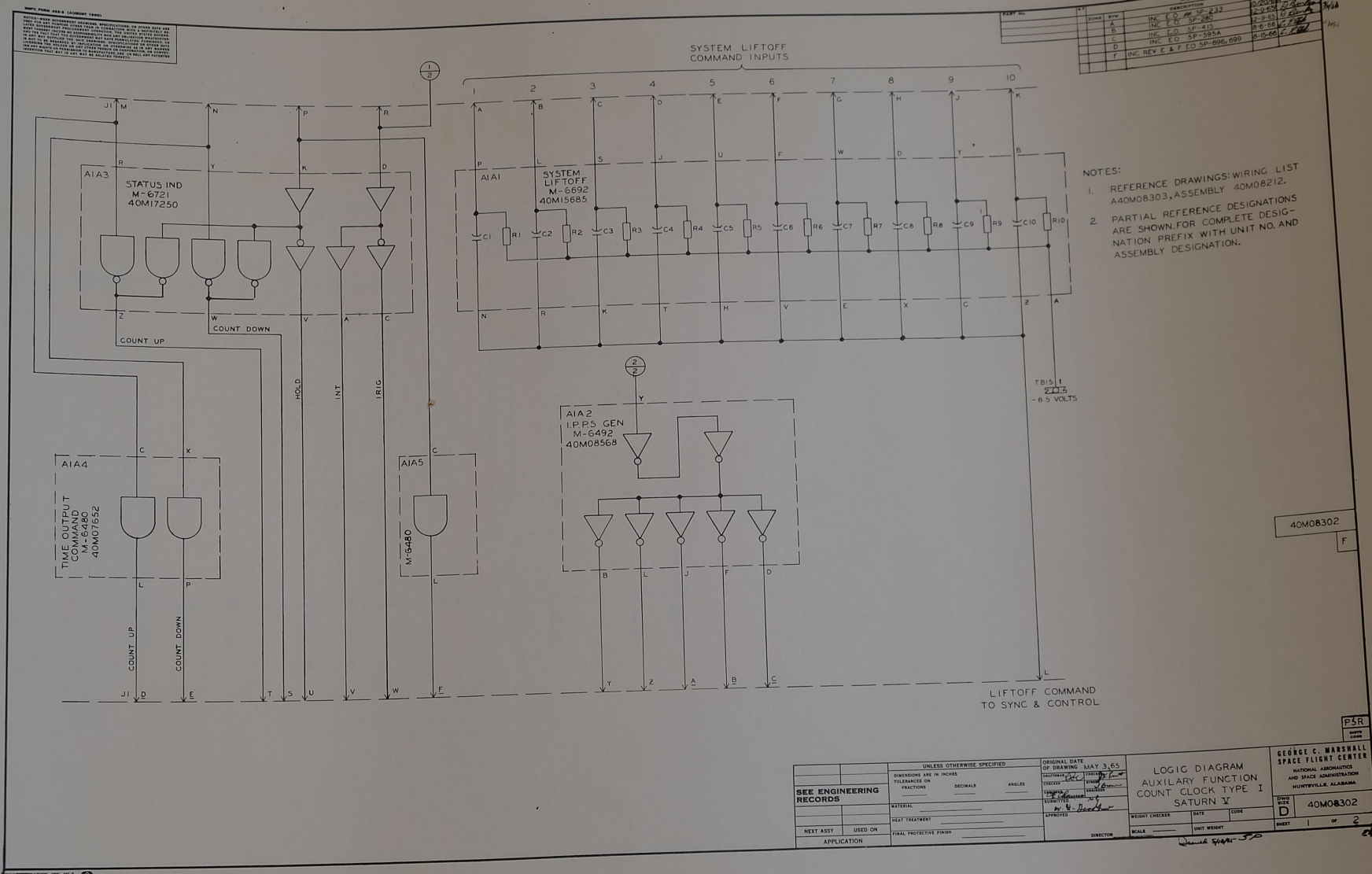
- NOTES:
- PARTIAL DESIGNATIONS ARE SHOWN FOR COMPLETE DESIGNATION, PREFIX WITH UNIT NUMBER AND ASSEMBLY DESIGNATION.
  - LAST BALLOON NUMBER USED: 21
  - FOR ASSEMBLY DRAWING, SEE J40M08206
  - FOR WIRING LIST, SEE A40M08298.
  - USE J1 WITH TYPE I 10DC; J3 WITH TYPE 2 10DC.

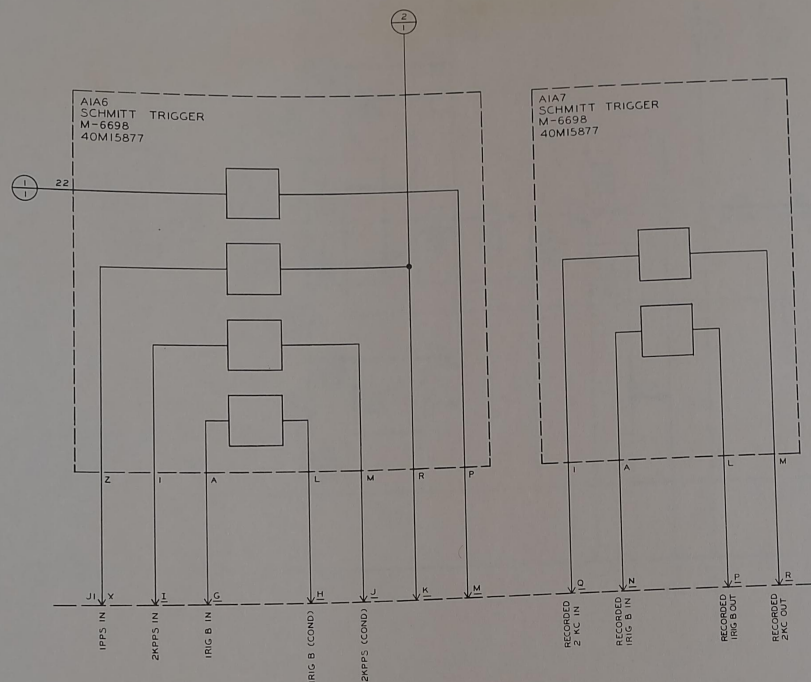
40M08297

UNLESS OTHERWISE SPECIFIED		ORIGINAL DATE OF DRAWING MAR 9, 65	LOGIC DIAGRAM COMPUTER INTERFACE COUNT CLOCK TYPE I SATURN V	GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA
SEE ENGINEERING RECORDS	DIMENSIONS ARE IN INCHES TOLERANCES ON FRACTIONS DECIMALS ANGLES	PREPARED BY [Signature] CHECKED BY [Signature] APPROVED BY [Signature]		
NEXT ASSY	USED ON	WEIGHT CHECKER		
APPLICATION	FINAL PROTECTIVE FINISH	SCALE		



		UNLESS OTHERWISE SPECIFIED:		ORIGINAL DATE OF EXPIRING	DATE OF EXPIRING		GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
SEE ENGINEERING RECORDS	DIMENSIONS ARE IN INCHES	TOLERANCES ON FRACTIONS	DECIMALS	ANGLES	MARKED DATE BY APPROVED DATE BY APPROVED	LOGIC DIAGRAM COMPUTER INTERFACE COUNT CLOCK TYPE I S LUTURN V		DRAWING NO. D
	MATERIAL				DATE BY APPROVED			40M08297
	NEXT TREATMENT							
NEXT ASSY	USED ON	FINAL PROTECTIVE FINISH			WEIGHT CHECKER		DATE	CODE
APPLICATION					SCALE		UNIT WEIGHT	WEIGHT
					DIRECTION		SHEET 6 OF	

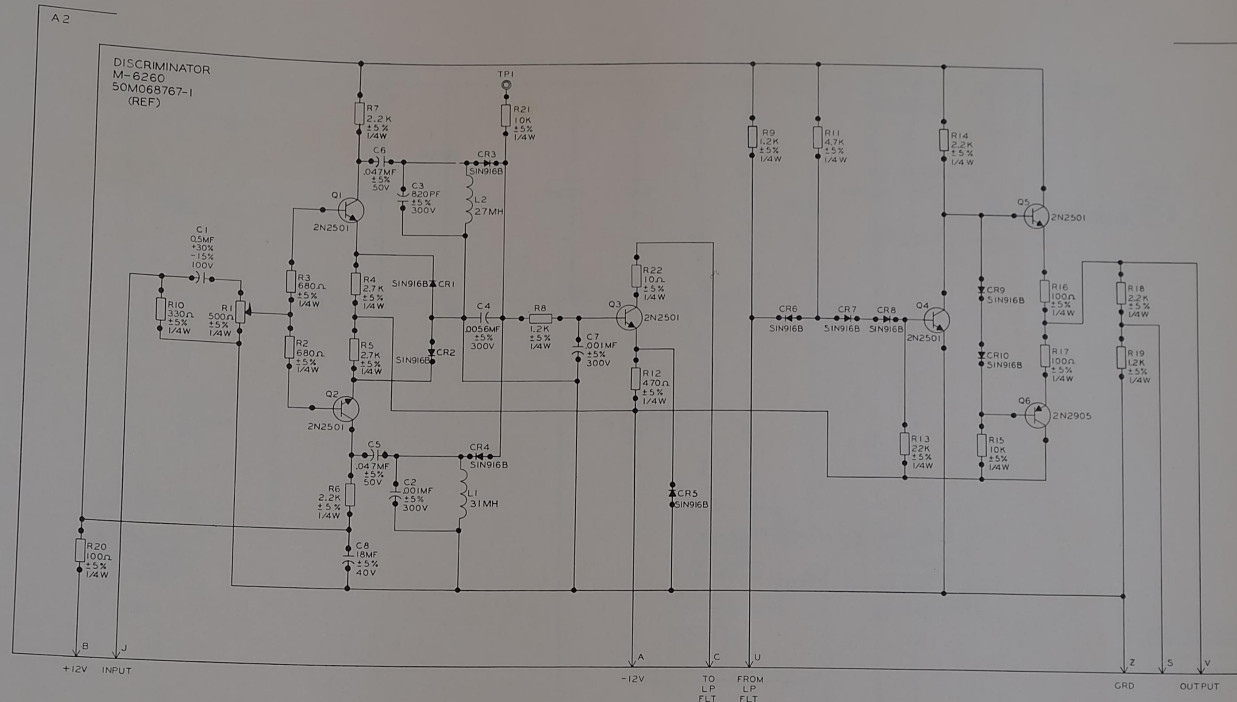




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6-119A



UNLESS OTHERWISE SPECIFIED				ORIGINAL DATE OF DRAWING APR 22, 65	ADVANCED ELECTRICAL UNIT SCHEMATIC, LINE RECEIVER COUNT CLOCK TYPE I SATURN V			GEORGE C. MARSHALL SPACE FLIGHT CENTER  NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA		
DIMENSIONS ARE IN INCHES TOLERANCES ARE IN FRACTIONS				DESIGNED BY: <i>W. J. Boudreau</i> CHECKED BY: <i>W. J. Boudreau</i> APPROVED BY: <i>W. J. Boudreau</i>						
SEE ENGINEERING RECORDS	DECIMALS			ANGLES						
	MATERIAL									
	NEXT TREATMENT									
SATURN GSE					APPROVED			DOWD FILE #		40M08309
NEXT ASSY		USED ON					WEIGHT CHECKED		DATE	CODE
APPLICATION		FINAL PROTECTIVE FINISH					SCALE		UNIT WEIGHT	
					SUBMITTER				SHEET 3 OF	

NOTES:

- | MOD KIT NO. | ECP NO. | DATE INC. |
|-------------|---------|-----------|
|             | 09-550  |           |
|             | 10-553  |           |

40M08314

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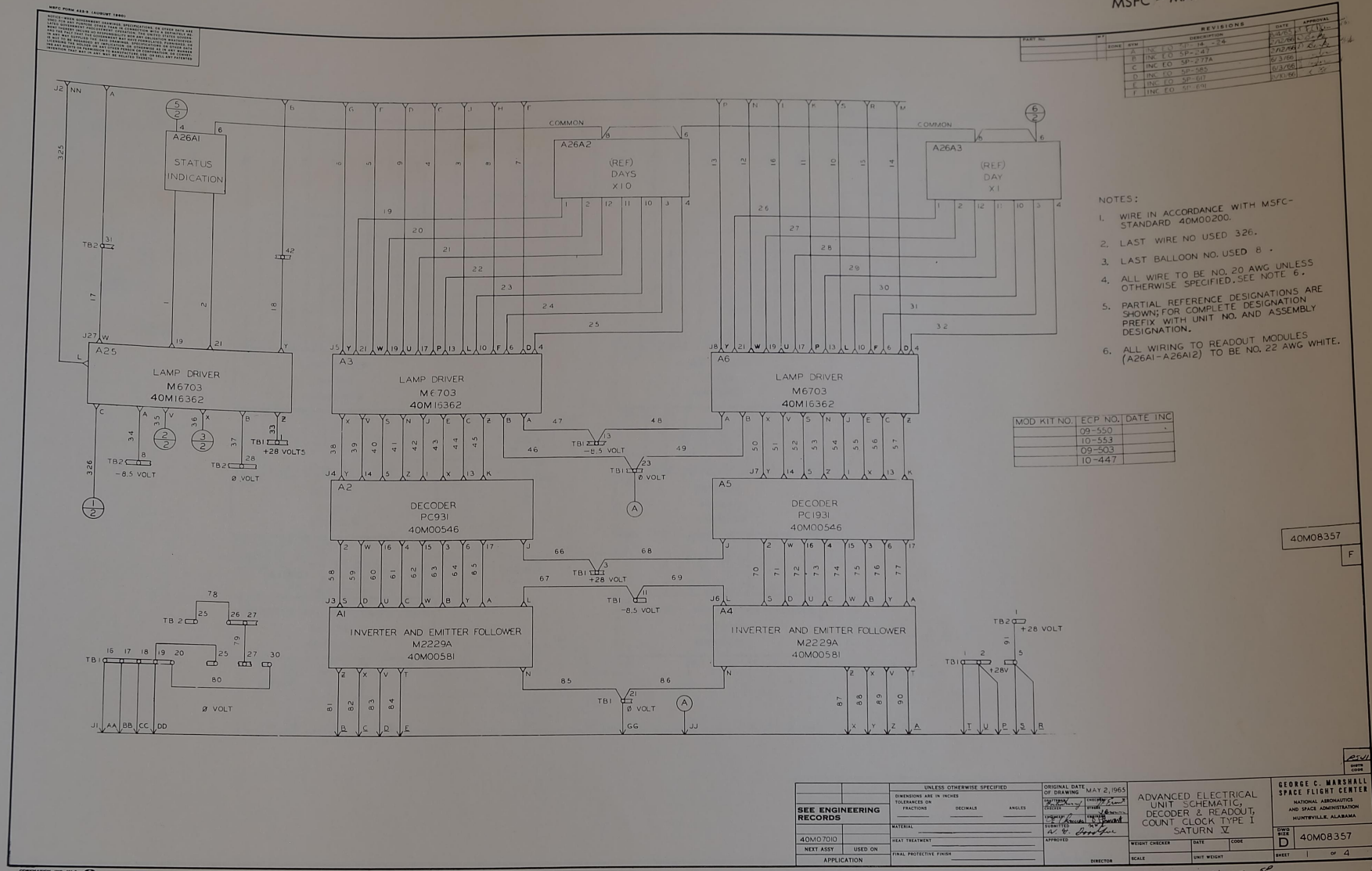


GEORGE C. MARSHALL  
SPACE FLIGHT CENTER  
NATIONAL AERONAUTICS  
AND SPACE ADMINISTRATION  
HUNTSVILLE, ALABAMA

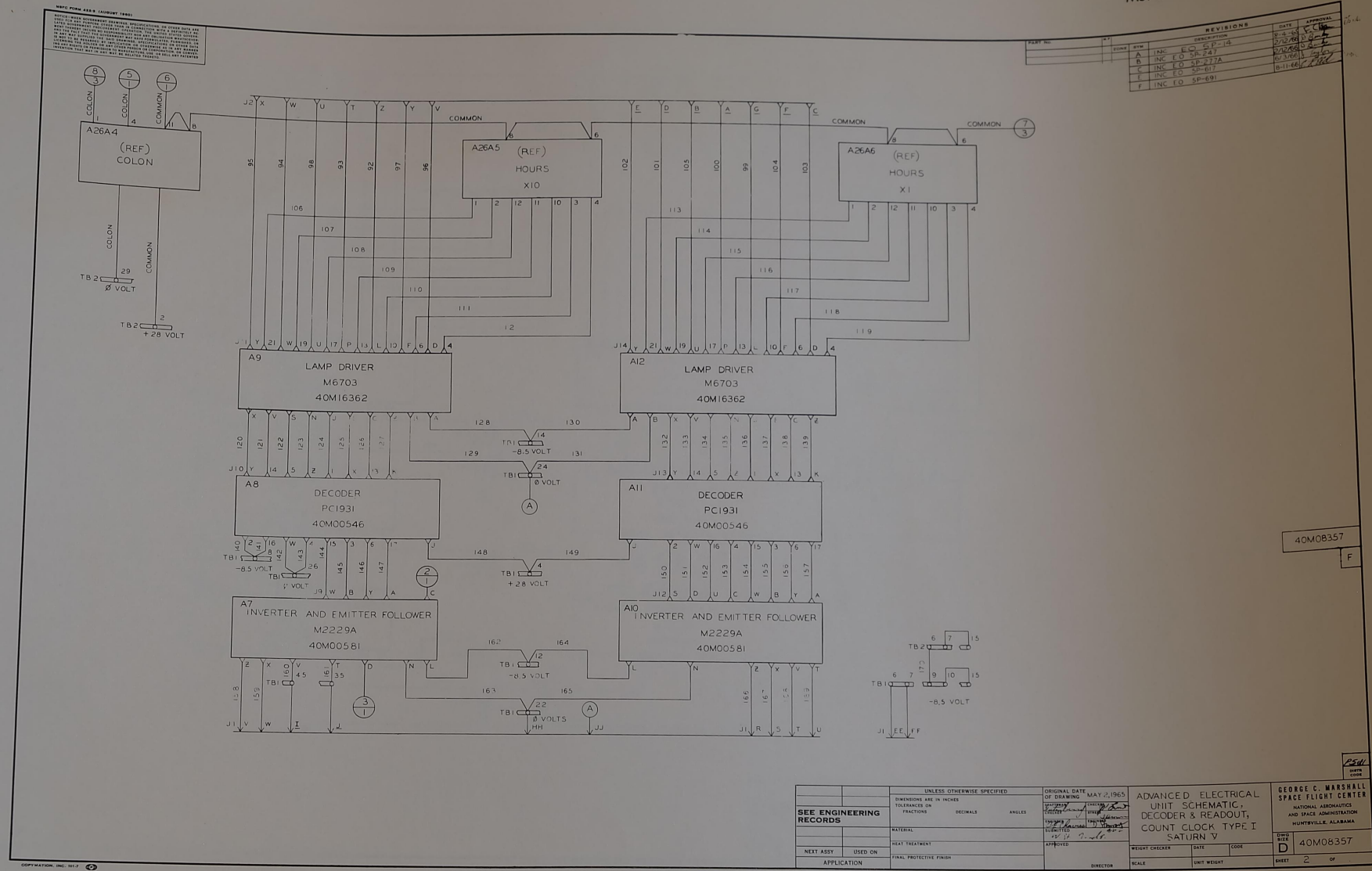
SIZE	40M08314
D	
SHEET	1 of 3

formed 5/20/65 51

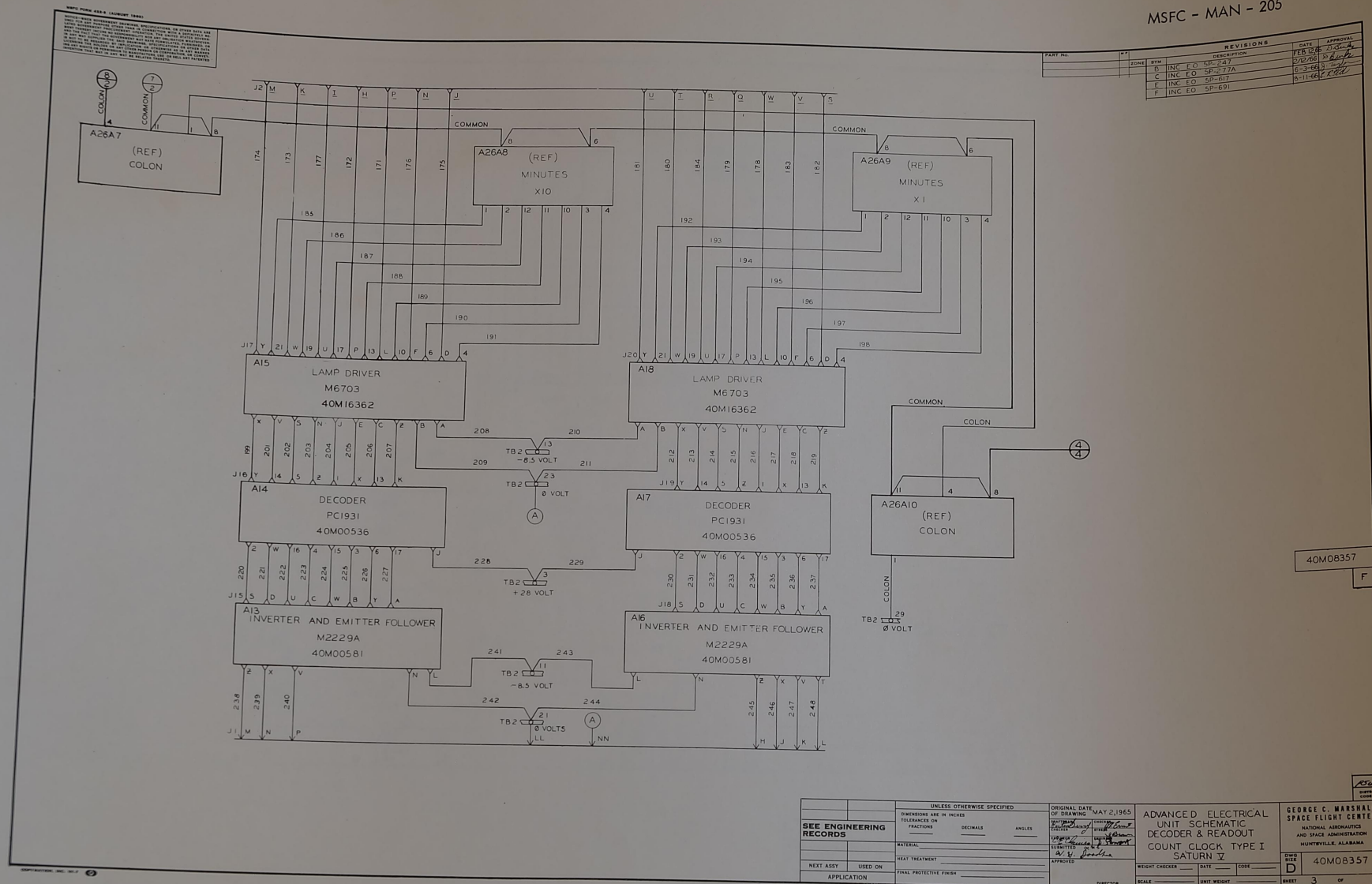
6-124



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